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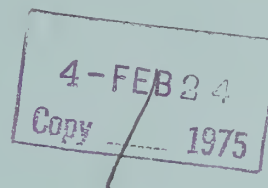
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MESA Informational Report/1975



Injury Experience in the Metallic Mineral Industries, 1970-71



UNITED STATES DEPARTMENT OF THE INTERIOR
Mining Enforcement and Safety Administration
Washington, D. C. 20240

United States Mining Enforcement and Safety Administration.

Informational Report 1008

United States Mining Enforcement and Safety Administration.
"Health and Safety Analysis Center, Branch of Recurring Reports."

Injury Experience in the Metallic Mineral Industries, 1970-71

By Staff, Branch of Recurring Reports

Health and Safety Analysis Center, Denver, Colo.



UNITED STATES DEPARTMENT OF THE INTERIOR

Rogers C. B. Morton, Secretary

✓ **Mining Enforcement and Safety Administration**

James M. Day, Administrator

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INJURY EXPERIENCE IN THE METALLIC MINERAL INDUSTRIES, 1970-71

by

Staff, Branch of Recurring Reports,
Health and Safety Analysis Center

ABSTRACT

This report reviews injury experience in the metallic mineral industries for 1970-71. For 1970 there are 26 tables and for 1971 there are 21 tables which summarize disabling work injuries by department, source of injury, extent of disability, part of body injured, and nature of injury. Correlative information on employment, worktime, and operating activity also is presented.

INTRODUCTION

Under provisions of Section 13, Public Law 89-577 (Federal Metal and Non-metallic Mine Safety Act), the Bureau of Mines collected injury and employment data for metal mines and mills by a mandatory reporting system in 1970 and 1971. This Act required the operators of mines and/or mills subject to the Act to submit reports of accidents, injuries, and occupational diseases, and related data.

Mine and mill operators classified work injuries by department, source of injury, extent of disability, part of body injured, and nature of injury, as requested on the annual employment canvass form. From these data, personnel of the Health and Safety Analysis Center of the Mining Enforcement and Safety Administration (MESA) determined the appropriate injury classification and tabulated the injuries by common factors. The relative prevalence of injuries to the different parts of the body, the nature of the injury, and the relative severity of injuries are among summarized factors. Data pertaining to injury and employment statistics are contained in appendix A for 1970 and in appendix B for 1971. Appendix C is a sample of the canvass form used to collect these data.

ACKNOWLEDGMENTS

MESA acknowledges the cooperation of the operators of the metal mines and mills who submitted data on injuries and related employment. This cooperation makes possible the compilation of industrywide information on injury experience to aid in the promotion of safe working habits and conditions.

SCOPE OF STATISTICS

The statistical data in this report cover the work experience of all personnel engaged in exploration, development, production, maintenance, repair, and force-account construction work, including supervisory and technical personnel and working partners. In 1971, the responsibility for collecting and analyzing injury and employment data for the smelting industry was transferred to the U.S. Department of Labor; consequently, this report contains information on the smelting industry for 1970 only. Information concerning onsite officeworkers at metal mines and mills appears separately and is presented only as mentioned specifically in table titles.

The compiled information is based on reports covering an annual average of 1,850 metal mines and 277 mills in operation during all or part of 1970-71. Most of the information on metal mines and mills was received directly from the operators. However, to obtain complete coverage of the industry, it was necessary to estimate injury and employment data for certain operations from information available from other sources.

The terminology used throughout this report is that generally used by the mineral-extractive industries and by the Bureau of Mines and MESA. The recording and measuring of work injury experience follows the U.S.A. Standard Method.¹ The classification and extent of industries is in close general agreement with the Standard Industrial Classification.²

DEFINITION OF TERMS

Key terms used in this publication series are defined or described as follows:

Disabling work injury.--Any injury suffered by a person that arises out of and in the course of his employment that results in death, permanent total disability, permanent partial disability, or temporary total disability.

Fatality.--Any death resulting from a disabling work injury, regardless of the time intervening between injury and death.

Permanent total disability.--Any disabling work injury other than death that permanently and totally incapacitates an employee from following any gainful occupation, or that results in the loss, or the complete loss of use, of both or any two: hands, arms, legs, feet, or eyes.

Permanent partial disability.--Any disabling work injury other than death or permanent total disability that results in the loss, or the complete loss of use, of any member or part of a member of the body, or any permanent

¹United States of America Standards Institute (formerly the American Standards Association, Inc.). U.S.A. Standard Method of Recording and Measuring Work Injury Experience. Bull. Z16.1--1967, pp. 7-15.

²Executive Office of the President, Bureau of the Budget. Standard Industrial Classification Manual. 1957 revision.

impairment of functions of the body or part thereof, regardless of any pre-existing disability of the injured member or impaired body function.

Temporary total disability.--Any disabling work injury that does not result in death or permanent impairment, but which renders the injured person unable to perform a regularly established job that is open and available to him, during the entire time interval corresponding to the hours of his regular shift on any one or more days (including Sundays, days off, or plant shutdown) subsequent to the date of injury.

Lost time injury.--Same as disabling work injury.

Disabling injury-frequency rate.--The number of disabling work injuries per million man-hours of exposure. It is calculated by multiplying the total number of injuries by one million and dividing the product by the total man-hours of worktime.

Disabling injury-severity rate.--The number of days lost or charged from disabling work injuries per million man-hours of exposure. It is calculated by multiplying the total number of days lost or charged by one million and dividing the product by the total man-hours of worktime.

Average severity.--The average number of days lost or charged per disabling injury. It is calculated from the total number of days lost or charged divided by the total number of disabling injuries.

Days lost.--The number of full calendar days the injured employee was unable to work as the result of a temporary total disability.

Days charged.--All fatalities and permanent total disabilities have a standard time-loss charge of 6,000 days. Injuries resulting in permanent partial disability are assigned a time-loss charge depending upon the particular injury as specified by the U.S.A. Standard Table of Scheduled Charges.³

Men employed.--Average number of men at work each day the mine or plant was active for production or development. As absenteeism and labor turnover are considered, this number is lower than the number available for work as measured by a count of names on the payroll.

Underground mine.--An underground mining establishment separated into an underground department and a surface department which includes the associated supply, maintenance, repair, and yard facilities on the surface.

Open pit.--An open pit mining establishment including the pit and associated surface facilities.

Other surface mining.--Placer, dredging, hydraulicking, leaching, wells and brines, Frasch sulfur, and exploration establishments as well as stock-piles, mine dumps, and old tailings dumps worked for recovery of ore.

³Pp. 10-11 of work cited in footnote 1.

Mill.--An establishment processing ores and minerals by washing, screening, crushing, grinding, concentrating, or other means. The mill may be in conjunction with a mining operation or may be operated independently as a custom mill.

Accident-cause classification.--The cause classification used in this report has been developed by the Bureau of Mines through many years of analyzing descriptions of accidents which resulted in injuries at mineral extractive and processing operations. The classification descriptions are as follows:

Falls of roof or back.--Falls of ore or rock from their in-place location in the mine roof, back, overhead, or brow. Excludes falls of rock or ore caused by equipment knocking out support or falls from pressure bumps or bursts.

Falls of face or side.--Any fall of ore, rock, or waste from their in-place location in the face, wall, breast, side, rib, or pillar in underground workings and from the side, face, or wall in open pits. Excludes falls caused by equipment knocking out support or falls from pressure bumps or bursts.

Pressure bumps or bursts.--Falling or flying roof, back, face, or side material caused by pressure bumps or bursts.

Inrush of water or material.--Includes inrushes of water or unconsolidated material caused by mining into or too close to flooded old workings, natural subterranean cavities, etc., or unconsolidated sediments such as sand.

Other falling materials or objects.--Rolling, shifting, sliding, or falling materials or objects not being handled or disturbed by the injured worker. Includes ore or rock already broken from its in-place position.

Slips or falls of persons.--Slips or falls on the same level and from an elevation are grouped separately. Slips or falls in or from haulage equipment that resulted from an accident on haulage, from the motion of haulage equipment, or while getting on or off haulage equipment are excluded. Slips or falls into moving or operating machinery or into electrically generated equipment also are excluded.

Handling materials.--Injuries occurring while moving, lifting, loading, carrying, or installing ore, rock, supplies, or materials; and injuries from flying particles from materials being handled or moved.

Handtools.--Accidents from tools in hands of injured worker or of fellow worker, except power-driven tools. Includes flying pieces from tools being used.

Stepping or kneeling on sharp or loose objects.--Stepping or kneeling on sharp or loose objects, slips or falls from stepping on loose objects, and cases of bursitis or "miner's knee" resulting from working on hands and/or knees.

Striking or bumping against objects.--Cases of walking or bumping into stationary objects. Excludes cases of striking or bumping in the course of servicing and repairing equipment, handling materials, using handtools, operating machinery or haulage equipment, etc. Excludes cases of striking or bumping moving or operating machinery or electrically generated equipment.

Haulage.--Haulage accidents are divided into the following six groups: (1) mine cages, cars, or motors; (2) shuttle cars, transloaders, and small mobile trucks; (3) railroad cars and locomotives; (4) water transportation; (5) automobiles, gasoline or diesel trucks, tractors, etc.; and (6) miscellaneous equipment (ropes, animals, belts, etc.). Included in the haulage category are falls of roof, back, or face from equipment knocking out supports; slips or falls of persons resulting from haulage accidents, from the motion of the equipment, or while getting on or off equipment; and flying particles set in motion by haulage equipment or draft therefrom.

Explosions of gas or dust.--Explosions of gas or dust in the mine environment.

Explosives and breaking agents.--Cases in which the detonation, fumes, flying fragments, or improper use of the explosive or breaking agent, fuses, caps, or detonators was the cause of injury.

Electricity.--Cases resulting from contact with electric current or from arcs or flashes.

Machinery.--Accidents while operating machines are separated from those while moving or tramping a whole machine, except continuous mining machines. Injuries occurring while moving a repair part of a machine are classed under "handling materials." Included in the machinery classification are falls of roof or face caused by machinery knocking out support, setting-up or servicing machinery, and flying particles set in motion by machinery. Excluded from the classification are accidents occurring in the course of repairing machines, unless the accident resulted from in-motion machinery.

Suffocation.--Divided into suffocation (1) from naturally occurring gases from strata or processing gases, or from oxygen-depleted atmospheres, and (2) from foreign gases such as from oil or gasoline fumes, from gases and smoke drawn underground from a surface fire, or from gas wells. Excludes gases from mine fires, explosions, and explosives use.

Mine fires and suffocation from fires.--Mine fire accidents are divided into (1) mine fires in which mineral or timber is burning, and (2) other fires in which equipment or material other than mineral or timber is burning.

Miscellaneous causes.--Includes flying particles from draft or wind; gas or burns from carbide; gas, burns, or flying materials or flashes from acetylene and electric welding and cutting; irritations and burns from battery fluid or other acids; burns from controlled wood, oil, or coal fires, steam, hot grease, oil, etc.; and all other accidents not elsewhere classified.

Occupational pneumoconiosis.--A chronic dust disease of the lungs, such as silicosis, caused by prolonged inhalation of occupational dusts, such as coal.

HISTORICAL INJURY EXPERIENCE IN THE METALLIC MINERAL INDUSTRY

Statistical data on injuries and related employment at metal mines first became available when the Bureau of Mines received reports from operating companies in 1911 in response to a canvass requesting voluntary submission of data. From 1911 through 1914, the Bureau's classification of nonfatal injuries covered two groups: (1) "Serious" injuries, disabling a workman for more than 20 days; and (2) "slight" injuries, causing disability not exceeding 20 days but longer than the day on which the injury occurred. From 1915 to 1929, a "serious" injury, as the term was used in Bureau reports, signified a temporary injury disabling an employee for more than 14 days. Beginning in 1930, all nonfatal injuries were classified by the current standard degree of injury as follows: Permanent total, permanent partial, and temporary total.

From 1911 through 1916, injury-frequency rates were indicated by showing the number of injuries per thousand men employed. Beginning in 1917 and continuing through 1930, a method was used whereby the total number of employees was converted to an equivalent number of 300-day workers, which was used to determine the injury rates per thousand 300-day workers.

Beginning in 1931, the Bureau of Mines collected and used the number of man-hours of exposure as the basis for determining injury-frequency rates. The injury-frequency rate per million man-hours worked constitutes an index which can be used for comparing injury experience between different years, different mines, and different industries. The use of this index eliminates the effect of variations in the number of men working at different mines, the number of working days per year, and the number of working hours per day. Most of the operating companies report the number of man-hours worked, and that figure is generally accepted by the Bureau as the best record obtainable. In some instances, however, it has been necessary to approximate the number of man-hours by multiplying the average number of employees by the number of days on which the employees worked, and then multiplying the product by the number of hours per day (length of working shift).

In 1956, the Bureau of Mines requested the operators of all metal mines, except gold-placer mines, to furnish a brief description of each disabling work injury and to report the number of days of disability experienced for each temporary total injury. Fatal and permanent total injuries are assigned the standard time charge of 6,000 days. Therefore, beginning with the year 1956, injury-severity rates have been available for the metal mining industry in the United States. Time-loss information for the gold-placer mining industry was first requested in 1960. This additional information allowed the Bureau to compile an industry severity rate for the total metal mining industry.

Beginning in 1961, the title "Injury Experience at Metallurgical Plants" was dropped, and the information content was redesignated. Information on

ore-dressing plants and their auxiliaries was designated "Mills" and associated with the metal mine data. Information on nonferrous smelters, refineries, and reduction plants is listed separately.

Data on gold placers were included with that on gold-silver lode operations for the first time in 1964. In earlier years the information on gold placers and lode operations had been maintained as separate groups.

Injury and employment data for the metallic mineral industries were collected on a voluntary basis from 1911 through 1961, and by a mandatory reporting system in 1962 under provisions of Public Law 87-300. During 1963-65 reporting was again on a voluntary basis while the various aspects of metal and nonmetal mines safety were studied. In 1966 reporting of injuries and employment data became mandatory under the provisions of Section 13, Public Law 89-577.

In 1971, the function of collecting, analyzing, and publishing accident, injury, and employment statistics for nonferrous smelters, refineries, and reduction plants was transferred to the U.S. Department of Labor.

Table 1 gives the scale of time charges for injuries. Table 2 gives the salient statistics for 1967-71; table 3 presents the injury experience and employment data on metal mines and mills in the United States for 1931-71.

GENERAL INJURY EXPERIENCE, 1970-71

During 1970, the overall injury experience, excluding officeworkers, at 2,152 metal mines and mills was 65 fatal and 4,243 nonfatal disabling work injuries. These injuries resulted in a combined fatal and nonfatal injury-frequency rate of 26.09 per million man-hours of exposure, consisting of a fatality rate of 0.39 and a nonfatal injury rate of 25.70. The combined injury-severity rate of 3,536 consisted of a fatal injury rate of 2,362 and a nonfatal injury rate of 1,173. The average severity of all injuries at metal mines and mills was 135 days lost per disabling work injury. An average of 67,643 men worked daily in the metallic mineral industry during 1970, accumulating approximately 165.1 million man-hours during the year.

During 1971, the overall injury experience, excluding officeworkers, at 2,101 metal mines and mills was 56 fatal and 3,815 nonfatal disabling work injuries. These injuries resulted in a combined fatal and nonfatal injury-frequency rate of 25.24 per million man-hours of exposure, consisting of a fatal injury rate of 0.37 and a nonfatal injury rate of 24.88. The combined injury-severity rate of 3,241 consisted of a fatal injury rate of 2,191 and a nonfatal injury rate of 1,050. The average severity of all injuries at metal mines and mills was 128 days lost per disabling work injury. An average of 65,362 men worked daily in the metallic mineral industry during 1971, accumulating approximately 153.3 million man-hours during the year.

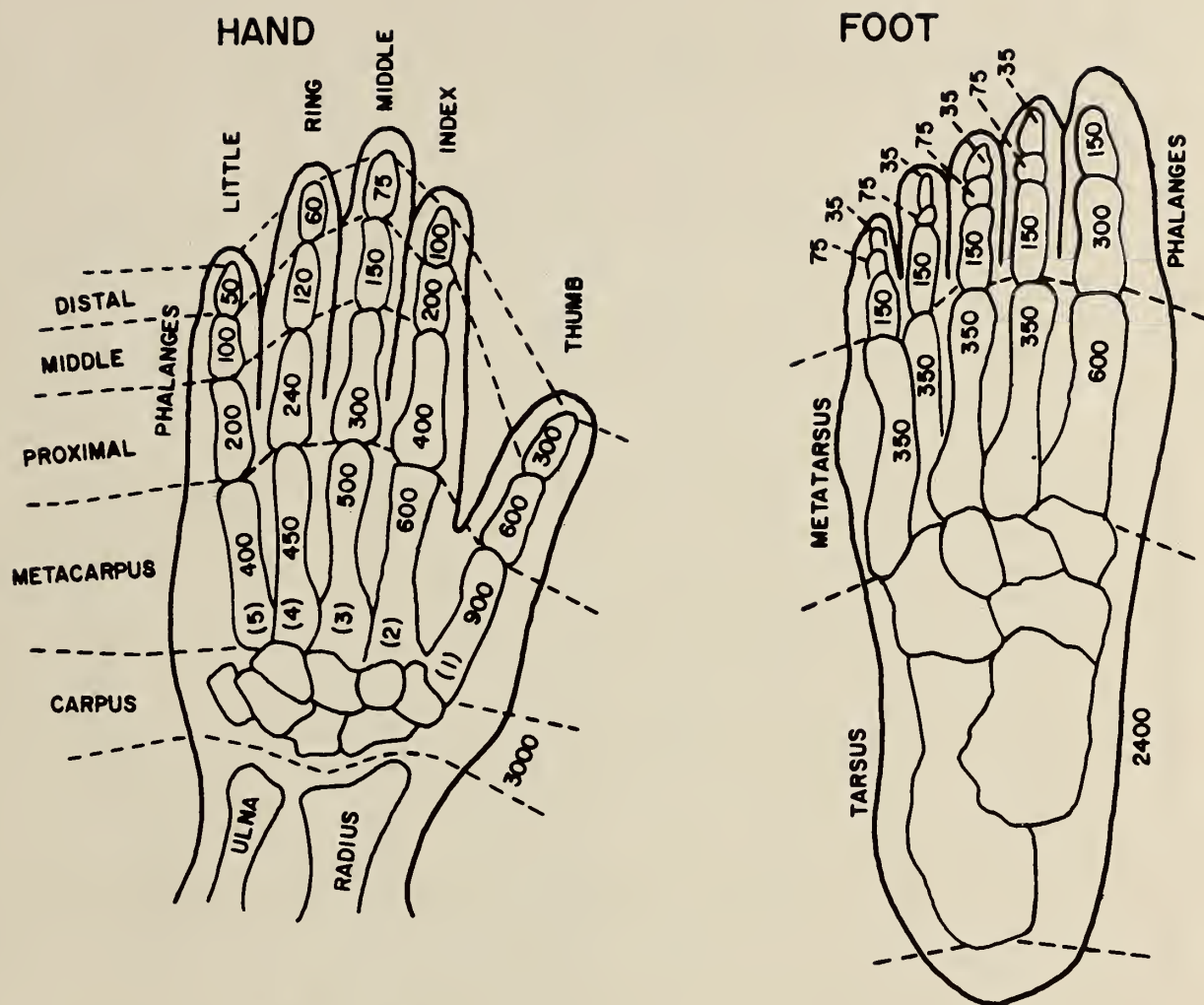
TABLE 1. - Scale of time charges¹ for weighting deaths, permanent total disabilities, and permanent partial disabilities for computing severity of injuries

Injury	Time charge (days)
Death.....	6,000
Permanent total disability.....	6,000
Dismemberment ² or total loss of use:	
Arm above elbow.....	4,500
Arm at or below elbow and above wrist.....	3,600
Hand at wrist.....	3,000
Thumb.....	(³)
Finger.....	(³)
Leg above knee.....	4,500
Leg at or below knee and above ankle.....	3,000
Foot at ankle.....	2,400
Great toe.....	(³)
Other toes.....	(³)
Loss of sight:	
One eye (whether or not there is sight in the other eye).....	1,800
Both eyes (in one accident).....	6,000
Complete industrial loss of hearing:	
One ear (whether or not there is hearing in the other ear).....	600
Both ears (in one accident).....	3,000
Unrepaired hernia.....	50

¹United States of America Standards Institute (formerly the American Standards Association, Inc.). U.S.A. Standard Method of Recording and Measuring Work Injury Experience. Bull. Z16.1--1967, 28 pp.

²Dismemberment means severance of any part of the bone.

³See figure 1 for scheduled charges for hand and foot.



NOTE :

Numbers shown on diagram are charges in days lost for loss of all or part of bone.

For additional information on use of the chart see 2.3.1.1 through 2.3.1.5 Bulletin Z.16.1-1967
USA Standard Method of Recording and Measuring Work Injury Experience

FIGURE 1. - Chart of scheduled charges for loss or loss of use involving hand or foot.

TABLE 2. - Salient statistics on injuries, injury rates, and worktime data on metal mines and mills in the United States, 1967-71

	Excluding officeworkers					Including officeworkers				
	1967	1968	1969	1970	1971	1967	1968	1969	1970	1971
Injuries:										
Fatal-----	73	59	68	65	56	73	59	68	65	56
Nonfatal:										
Permanent total-----	4	1	2	1	3	4	1	2	1	3
Permanent partial-----	113	133	113	123	103	114	135	113	123	103
Temporary total-----	3,351	3,241	3,616	4,119	3,709	3,361	3,248	3,619	4,132	3,717
Total nonfatal-----	3,468	3,375	3,731	4,243	3,815	3,479	3,384	3,734	4,256	3,823
Grand total-----	3,541	3,434	3,799	4,308	3,871	3,552	3,443	3,802	4,321	3,879
Injury rates:										
Frequency per million man-hours:										
Fatal-----	0.51	0.40	0.43	0.39	0.37	0.47	0.37	0.39	0.36	0.33
Nonfatal-----	24.30	22.67	23.50	25.70	24.88	22.37	20.98	21.62	23.76	22.71
Total fatal and nonfatal----	24.81	23.07	23.93	26.09	25.24	22.84	21.34	22.01	24.13	23.04
Severity per million man-hours:										
Fatal-----	3,068	2,378	2,570	2,362	2,191	2,816	2,194	2,362	2,177	1,996
Nonfatal-----	1,368	1,177	1,190	1,173	1,050	1,257	1,092	1,095	1,083	957
Total fatal and nonfatal----	4,436	3,555	3,760	3,536	3,241	4,073	3,286	3,456	3,261	2,953
Average severity (days lost per injury):										
Permanent partial-----	623	599	659	583	427	617	597	659	583	427
Temporary total-----	30	28	28	28	27	30	28	28	28	27
All injuries-----	179	154	157	135	128	178	154	157	135	128
Average men working daily-----	69,424	66,478	68,765	67,643	65,362	75,541	72,105	75,110	74,040	72,216
Average days active-----	257	279	288	304	292	257	279	287	301	290
Man-days worked-----	17,816,436	18,532,762	19,823,919	20,552,527	19,083,808	19,413,826	20,091,571	21,569,742	22,299,765	20,956,201
Man-hours worked-----	142,744,284	148,875,044	158,773,372	165,090,939	153,345,622	155,516,296	161,332,220	172,745,539	179,105,290	168,361,240
Average hours per man per day-----	8.01	8.03	8.01	8.03	8.04	8.01	8.03	8.01	8.03	8.03
Average hours per man per year-----	2,056	2,239	2,309	2,346	2,059	2,059	2,237	2,300	2,419	2,331
Active mines-----	2,031	2,574	2,332	1,886	1,813	2,031	2,574	2,332	1,886	1,813
Active mills-----	281	250	248	266	288	281	250	248	266	288

TABLE 3. - Injury experience and worktime data at metal mines and mills
in the United States, 1931-71 1/

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Year	Injuries		Frequency rates per million man-hours		Average men working daily	Average days active	Man-days worked (thousands)	Man-hours worked (thousands)
	Fatal	Nonfatal	Fatal	Nonfatal				
At Mines								
1931-----	147	7,868	1.06	56.92	71,991	232	16,692	138,237
1932-----	100	4,486	1.25	55.93	46,602	209	9,748	80,213
1933-----	87	5,180	1.09	64.75	49,338	201	9,913	80,006
1934-----	108	7,105	1.07	70.38	58,411	219	12,776	100,959
1935-----	157	9,393	1.08	64.72	83,975	218	18,266	145,134
1936-----	195	13,606	1.08	75.25	90,552	249	22,521	180,803
1937-----	206	17,068	.94	77.93	108,412	252	27,296	219,008
1938-----	150	11,996	.88	70.42	93,501	227	21,255	170,343
1939-----	163	12,991	.86	68.53	102,279	233	23,836	189,554
1940-----	209	13,940	.99	65.84	110,340	241	26,631	211,740
1941-----	213	14,590	.92	63.31	114,202	254	29,034	230,453
1942 2/ -----	215	12,420	.96	55.67	99,769	280	27,968	223,093
1943-----	195	11,533	.95	55.92	87,880	293	25,790	206,242
1944-----	130	8,894	.80	54.56	70,413	289	20,349	163,027
1945-----	96	6,922	.68	48.99	61,294	288	17,673	141,295
1946-----	90	7,345	.69	56.32	65,234	249	16,238	130,406
1947-----	126	8,293	.80	52.81	71,228	275	19,567	157,024
1948-----	104	7,631	.64	47.25	71,436	282	20,124	161,516
1949-----	69	6,940	.48	48.07	71,664	252	18,067	144,368
1950-----	84	6,611	.57	44.74	68,292	271	18,522	147,765
1951-----	95	6,824	.60	42.81	71,603	278	19,913	159,417
1952-----	117	6,684	.74	42.13	74,626	265	19,770	158,649
1953-----	92	6,164	.59	39.36	72,529	270	19,559	156,605
1954-----	86	4,994	.66	38.27	66,610	245	16,294	130,488
1955-----	79	5,837	.58	42.62	65,143	263	17,113	136,950
1956-----	89	5,475	.62	37.91	68,273	264	18,017	144,407
1957-----	71	4,554	.50	32.03	68,457	259	17,751	142,181
1958-----	70	3,499	.64	31.95	59,608	229	13,665	109,523
1959-----	73	3,281	.73	32.62	58,557	214	12,503	100,576
1960-----	84	3,794	.70	31.71	60,595	246	14,910	119,653
1961-----	50	3,669	.46	34.07	54,251	247	13,416	107,678
1962-----	61	3,263	.59	31.42	52,287	247	12,924	103,867
1963-----	41	3,075	.42	31.66	47,844	253	12,096	97,111
1964-----	55	3,266	.53	31.34	49,765	261	12,996	104,204
1965-----	58	3,292	.52	29.32	51,420	272	13,994	112,277
1966-----	75	3,435	.67	30.71	49,920	279	13,944	111,857
1967-----	66	2,881	.69	30.08	48,496	246	11,953	95,794
1968-----	57	2,836	.58	28.74	46,180	266	12,271	98,693
1969-----	62	3,111	.60	29.92	46,494	279	12,963	103,973
1970-----	57	3,521	.53	32.66	46,108	291	13,416	107,794
1971-----	47	3,214	.46	31.35	45,189	282	12,742	102,512
At Mills								
1945-----	9	1,032	0.23	26.94	15,792	302	4,768	38,305
1946-----	10	866	.31	26.99	15,597	257	4,003	32,082
1947-----	7	871	.19	24.05	15,937	283	4,517	36,213
1948-----	9	834	.25	23.10	15,634	288	4,506	36,104
1949-----	7	798	.20	22.82	16,688	261	4,361	34,974
1950-----	7	785	.20	22.55	14,956	291	4,348	34,815
1951-----	6	778	.15	19.86	16,339	299	4,890	39,179
1952-----	4	852	.10	20.59	17,511	294	5,161	41,370
1953-----	4	826	.09	17.64	19,757	296	5,843	46,813
1954-----	10	830	.24	19.71	19,095	275	5,257	42,121
1955-----	3	795	.08	19.96	17,631	280	4,935	39,837
1956-----	9	679	.20	14.94	19,261	294	5,668	45,440
1957-----	9	743	.18	14.92	21,566	288	6,214	49,795
1958-----	3	467	.07	11.17	19,677	266	5,225	41,799
1959-----	5	353	.13	9.14	19,423	248	4,808	38,621
1960-----	5	488	.09	9.10	22,529	297	6,689	53,638
1961-----	3	458	.06	9.24	20,518	301	6,186	49,552
1962-----	14	482	.28	9.80	19,983	306	6,122	49,163
1963-----	5	410	.11	9.34	18,016	304	5,472	43,874
1964-----	5	406	.11	8.97	18,375	307	5,646	45,243
1965-----	3	472	.06	9.70	19,484	312	6,074	48,657
1966-----	7	575	.14	11.26	20,175	315	6,357	51,050
1967-----	7	587	.15	12.50	20,928	280	5,863	46,951
1968-----	2	539	.04	10.74	20,298	308	6,262	50,182
1969-----	6	620	.11	11.31	22,271	308	6,861	54,800
1970-----	8	722	.14	12.60	21,535	331	7,136	57,297
1971-----	9	601	.18	11.82	20,173	314	6,342	50,834

1/ Mill data not available prior to 1945.

2/ Fluorspar mines prior to 1942 were included with lead-zinc data for the Mississippi Valley States and are now included with nonmetal mines in a separate publication "Injury Experience in the Nonmetallic Industries (Except Stone and Coal)."

APPENDIX A.--1970 DATA

TABLE A-1. - Injury experience by degree and worktime data on metal mines and mills in the United States, by general work location, 1970

General work location	Injuries						Frequency rates per million man-hours			Severity rates per million man-hours			Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal			All injuries	Fatal	Non-fatal	All injuries	Fatal	Non-fatal	All injuries					
		Permanent	Tempo-rary total	Total non-fatal												
												Total				
Underground mines:	43	1	61	2,601	2,663	2,706	0.96	59.34	60.30	5.749	2.358	8.107	275	5,606,488	44,874,014	
Underground-----	1	-	5	221	226	227	.08	17.83	17.91	.473	.781	1,255	274	1,582,961	12,672,282	
Surface-----																
Total or average-----	44	1	66	2,822	2,889	2,933	.76	50.20	50.97	4.588	2.010	6,598	275	7,189,449	57,546,296	
Open pit mines-----	13	-	24	586	610	623	.26	12.39	12.65	1.584	.729	2,313	321	6,103,829	49,238,904	
Other surface mining-----	-	-	3	19	22	22	-	21.81	21.81	-	807	807	134	122,766	1,008,599	
Total or average, mining-----	57	1	93	3,427	3,521	3,578	.53	32.66	33.19	3.173	1.414	4,586	291	13,416,044	107,793,799	
Mills-----	8	-	30	692	722	730	.14	12.60	12.74	838	721	1,559	331	7,136,483	57,297,140	
Grand total or average-----	65	1	123	4,119	4,243	4,308	.39	25.70	26.09	2,362	1,173	3,536	304	20,552,527	165,090,939	

TABLE A-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1970

General work location and detailed cause of injury	Injuries						Average severity			
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries	
		Permanent		Temporary total	Total non-fatal					
		Total	Partial							
UNDERGROUND MINES										
Underground:										
Falls of roof or back:										
While mining-----	8	-	-	117	117	125	-	48	429	
While loading-----	1	-	-	26	26	27	-	36	257	
While testing or barring down back-----	1	-	2	55	57	58	862	42	173	
While setting or removing timber or other support-----	3	-	1	25	26	29	450	27	660	
While preparing or installing rock bolt-----	-	-	-	31	31	31	-	27	27	
While moving machinery-----	-	-	-	2	2	2	-	32	32	
All other-----	-	-	2	52	54	54	1,050	43	80	
Pressure bumps or bursts-----	-	-	-	3	3	3	-	164	164	
Falls of face or side:										
While mining-----	-	-	-	66	66	66	-	33	33	
While loading-----	-	-	-	9	9	9	-	11	11	
While testing or barring down back-----	-	-	-	40	40	40	-	23	23	
While setting or removing timber or other support-----	-	-	2	10	12	12	648	32	135	
While preparing or installing rock bolt-----	-	-	-	6	6	6	-	97	97	
While moving machinery-----	-	-	-	2	2	2	-	20	20	
All other-----	-	-	-	29	29	29	-	24	24	
Sliding or falling material or objects:										
Timber or other support-----	-	-	1	7	8	8	338	63	97	
Dropped or thrown by coworker-----	-	-	-	5	5	5	-	8	8	
From car, bin, platform, or chute-----	-	-	1	33	34	34	400	24	35	
Falling cage-----	-	-	-	2	2	2	-	67	67	
Falling equipment or machinery under repair-----	-	-	-	12	12	12	-	15	15	
From stockpile, dump, or gob-----	-	-	-	31	31	31	-	30	30	
All other-----	-	-	-	29	29	29	-	9	9	
Slips or falls of persons:										
On same level:										
While escaping another hazard-----	-	-	-	12	12	12	-	15	15	
While handling material-----	-	-	-	66	66	66	-	26	26	
Caused by handtool slipping or breaking-----	-	-	-	11	11	11	-	16	16	
While operating or moving machinery-----	-	-	1	34	35	35	600	16	33	
All other-----	-	-	-	95	95	95	-	22	22	
From an elevation:										
While escaping another hazard-----	-	-	-	7	7	7	-	10	10	
While handling material-----	1	1	1	46	48	49	300	31	280	
Caused by handtool slipping or breaking-----	-	-	-	3	3	3	-	69	69	
While operating or moving machinery-----	-	-	-	32	32	32	-	40	40	
Caused by failure of scaffold, ladder, or other support-----	1	-	1	32	33	34	450	41	229	
All other-----	-	-	1	64	65	65	68	29	30	
Handling material:										
Prop, stull, or timber-----	-	-	5	147	152	152	167	23	27	
Ore, valuable mineral-----	1	-	-	15	15	16	-	11	385	
Rock or waste-----	-	-	1	77	78	78	140	14	15	
Rail-----	-	-	1	55	56	56	30	21	21	
Wire or wire rope-----	-	-	3	32	35	35	317	23	49	
Rock-bolting material-----	-	-	-	4	4	4	-	17	17	
Flying particle while loading car-----	-	-	-	1	1	1	-	6	6	
Flying particle while handling material-----	-	-	1	44	45	45	1,800	6	46	
All other-----	-	-	5	168	173	173	267	19	27	
Handtools:										
Pick-----	-	-	-	8	8	8	-	9	9	
Axe, hatchet, or adz-----	-	-	-	11	11	11	-	23	23	
Hammer or sledge-----	-	-	-	9	9	9	-	11	11	
Crowbar or bar-----	-	-	-	34	34	34	-	21	21	
Saw-----	-	-	-	4	4	4	-	9	9	
Handtool used to install rock bolt-----	-	-	-	1	1	1	-	4	4	
In hand of fellow worker-----	-	-	-	5	5	5	-	26	26	
Flying particle from tool or object worked on-----	-	-	-	17	17	17	-	8	8	
All other-----	-	-	-	9	9	9	-	29	29	
Stepping or kneeling on sharp or loose objects:										
Stepping on sharp object-----	-	-	-	8	8	8	-	7	7	
Stepping on loose object-----	-	-	-	73	73	73	-	30	30	
Striking or bumping against objects-----	-	-	-	10	10	10	-	14	14	
Haulage:										
Cages, cars, or motors:										
Struck, run over, or squeezed between:										
Coupling or uncoupling-----	-	-	2	14	16	16	200	30	51	
Switching, spragging, blocking, or braking-----	-	-	-	6	6	6	-	32	32	
Pulling, pushing, or dropping-----	-	-	-	2	2	2	-	11	11	
Operating or riding-----	-	-	2	14	16	16	1,050	26	154	
All other-----	2	-	-	17	17	19	-	29	657	
Squeezed between cage, car, or motor, and other object:										
Coupling or uncoupling-----	-	-	2	4	6	6	270	14	99	
Switching, spragging, blocking, or braking-----	-	-	-	1	1	1	-	90	90	
Pulling, pushing, or dropping-----	-	-	-	3	3	3	-	60	60	
Operating or riding-----	2	-	-	14	14	16	-	60	802	
All other-----	-	-	1	20	21	21	50	42	42	
Derailment-----	1	-	1	17	18	19	300	44	371	
Rerailing-----	-	-	1	16	17	17	150	27	34	
Collision (while under control)-----	1	-	-	4	4	5	-	14	1,211	
Falling, slipping, or jumping into or from-----	1	-	1	23	24	25	50	40	279	
Shuttle cars, transloaders, and small mobile trucks:										
Struck or run over-----	1	-	-	2	2	3	-	46	2,030	
Squeezed between shuttle car, transloader, or small mobile truck, and other object-----	1	-	-	-	-	1	-	-	6,000	
All other-----	1	-	1	25	26	27	150	40	265	
Railroad cars and locomotives-----	-	-	-	2	2	2	-	94	94	
Automobiles, gasoline or diesel trucks:										
While operating-----	1	-	-	11	11	12	-	68	562	
Slip or fall on or from-----	-	-	-	6	6	6	-	36	36	

TABLE A-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1970 - Continued

General work location and detailed cause of injury	Injuries					Average severity			
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries
		Permanent		Temporary total	Total non-fatal				
		Total	Partial						
UNDERGROUND MINES - Continued									
Underground - Continued									
Haulage - Continued									
Miscellaneous haulage:									
Coupling or uncoupling (cars not moving)-----	-	-	-	1	1	1	-	20	20
Rope or cable on haulage-----	-	-	-	2	2	2	-	108	108
Slip or strain from moving car by hand-----	-	-	1	25	26	26	600	18	41
Riding or getting on or off conveyor belt-----	-	-	-	1	1	1	-	10	10
Flying particle-----	-	-	-	7	7	7	-	2	2
All other-----	1	-	-	19	19	20	-	27	325
Explosions of gas or dust: Caused by match, igniter, or smoking-----	-	-	-	2	2	2	-	39	39
Explosives:									
Premature shot or blast-----	1	-	-	1	1	2	-	245	3,122
Misfire or digging into unexploded hole-----	-	-	1	4	5	5	1,950	14	401
Flying fragments-----	1	-	2	2	4	5	670	2	1,469
Suffocation from smoke-----	-	-	-	9	9	9	-	8	8
Cap or detonator-----	-	-	-	2	2	2	-	37	37
Ammonium nitrate-----	-	-	-	1	1	1	-	1	1
All other-----	-	-	-	2	2	2	-	167	167
Electricity:									
Trolley wire or pole-----	2	-	-	-	-	2	-	-	6,000
Power or lighting circuit-----	-	-	-	1	1	1	-	14	14
Cut-out switch or junction box-----	-	-	-	1	1	1	-	33	33
Cable, cable arc, or blowup-----	-	-	-	1	1	1	-	26	26
All other-----	-	-	-	1	1	1	-	7	7
Machinery:									
Belt conveyor-----	-	-	-	1	1	1	-	2	2
Chain, bucket, shaker, or screw conveyor-----	-	-	-	1	1	1	-	36	36
Mucking machine, mechanical loader-----	-	-	1	39	40	40	100	32	34
Power drill; rotary or percussive (except rock bolting)-----	-	-	6	133	139	139	247	24	34
Power drill for rock bolting-----	-	-	-	10	10	10	-	10	10
Power equipment (except drill) for rock bolting-----	-	-	-	5	5	5	-	20	20
Power shovel, dragline, bulldozer, etc-----	2	-	4	69	73	75	950	30	239
Stationary machinery-----	1	-	3	14	17	18	383	34	423
While moving any machine except mining or loading-----	-	-	-	54	54	54	-	16	16
Particle set in motion by machinery (except rock bolting)-----	-	-	-	76	76	76	-	9	9
Particle set in motion by rock bolting equipment-----	-	-	-	10	10	10	-	5	5
Fall of roof, face, or rib caused by machinery (except haulage) knocking out support-----	-	-	-	3	3	3	-	60	60
All other-----	-	-	-	29	29	29	-	34	34
Suffocation (no flame or smoldering):									
Natural mine gas or oxygen deficient-----	-	-	-	4	4	4	-	5	5
Foreign gas-----	-	-	-	9	9	9	-	8	8
Fires or suffocation from fires: Oil, gasoline, other flammable liquid-----	-	-	-	1	1	1	-	32	32
Miscellaneous causes:									
Flying particle from draft or wind-----	-	-	-	2	2	2	-	10	10
Acetylene or electric welding or cutting-----	-	-	-	9	9	9	-	5	5
Irritation or burn from caustic or acid-----	-	-	-	22	22	22	-	5	5
Burn from controlled fire-----	-	-	-	8	8	8	-	16	16
All other-----	-	-	-	12	12	12	-	14	14
Pneumoconiosis-----	-	-	2	1	3	3	1,650	17	1,106
Total or average, excluding shaft and slope-----	35	1	60	2,521	2,582	2,617	505	26	120
Shaft and slope:									
Falls of face or side:									
While testing or barring down back-----	-	-	-	1	1	1	-	9	9
While setting or removing timber or other support-----	-	-	-	1	1	1	-	2	2
While moving machinery-----	-	-	-	1	1	1	-	2	2
All other-----	-	-	-	2	2	2	-	2	2
Inrush of water-----	1	-	-	1	1	2	-	40	3,020
Sliding or falling material or objects:									
From car, bin, platform, or chute-----	-	-	-	3	3	3	-	10	10
Falling cage-----	-	-	1	4	5	5	1,200	43	275
From stockpile, dump, or gob-----	-	-	-	2	2	2	-	8	8
All other-----	-	-	-	4	4	4	-	4	4
Slips or falls of persons:									
On same level:									
While handling material-----	-	-	-	2	2	2	-	2	2
All other-----	-	-	-	3	3	3	-	37	37
From an elevation:									
While handling material-----	-	-	-	3	3	3	-	20	20
While operating or moving machinery-----	-	-	-	2	2	2	-	16	16
Down shaft or slope-----	2	-	-	1	1	3	-	156	4,052
Caused by failure of scaffold, ladder, or other support-----	-	-	-	1	1	1	-	50	50
All other-----	1	-	-	3	3	4	-	24	1,518
Handling material:									
Prop, stull, or timber-----	-	-	-	3	3	3	-	42	42
Rock or waste-----	-	-	-	1	1	1	-	14	14
Rail-----	-	-	-	1	1	1	-	145	145
Wire or wire rope-----	-	-	-	1	1	1	-	6	6
Flying particle while handling material-----	-	-	-	1	1	1	-	2	2
All other-----	-	-	-	7	7	7	-	10	10
Haulage:									
Cages, cars, or motors:									
Struck, run over, or squeezed between: Operating or riding-----	-	-	-	2	2	2	-	40	40
Falling, slipping, or jumping into or from-----	-	-	-	3	3	3	-	56	56
Miscellaneous haulage-----	-	-	-	1	1	1	-	75	75

TABLE A-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1970 - Continued

General work location and detailed cause of injury	Injuries						Average severity		
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries
		Permanent		Temporary total	Total non-fatal				
		Total	Partial						
UNDERGROUND MINES - Continued									
Shaft and slope - Continued									
Explosives: Misfire or digging into unexploded hole-----	-	-	-	2	2	2	-	55	55
Electricity: Transformer, generator, or stationary motor-----	-	-	-	1	1	1	-	8	8
Machinery:									
Mucking machine, mechanical loader-----	1	-	-	3	3	4	-	12	1,509
Power drill; rotary or percussive (except rock bolting)----	-	-	-	5	5	5	-	11	11
Stationary machinery-----	-	-	-	1	1	1	-	7	7
While moving any machine except mining or loading-----	-	-	-	3	3	3	-	16	16
Particle set in motion by machinery (except rock bolting)---	-	-	-	2	2	2	-	2	2
Suffocation (no flame or smoldering: Foreign gas-----	3	-	-	-	-	3	-	-	6,000
Miscellaneous causes:									
Acetylene or electric welding or cutting-----	-	-	-	3	3	3	-	2	2
Irritation or burn from caustic or acid-----	-	-	-	6	6	6	-	15	15
Total or average, shaft and slope-----	8	-	1	80	81	89	1,200	23	573
Total or average, underground-----	43	1	61	2,601	2,663	2,706	516	26	134
Surface at underground:									
Sliding or falling material or objects:									
From car, bin, platform, or chute-----	-	-	-	5	5	5	-	29	29
Palling equipment or machinery under repair-----	-	-	-	5	5	5	-	57	57
From stockpile, dump, or gob-----	-	-	-	1	1	1	-	9	9
All other-----	-	-	-	3	3	3	-	83	83
Slips or falls of persons:									
On same level:									
While handling material-----	-	-	-	13	13	13	-	109	109
Caused by handtool slipping or breaking-----	-	-	-	4	4	4	-	30	30
While operating or moving machinery-----	-	-	-	2	2	2	-	48	48
All other-----	-	-	-	13	13	13	-	16	16
From an elevation:									
While handling material-----	-	-	1	5	6	6	300	64	103
While operating or moving machinery-----	-	-	-	3	3	3	-	8	8
Caused by failure of scaffold, ladder, or other support----	-	-	-	2	2	2	-	7	7
All other-----	-	-	-	5	5	5	-	46	46
Handling material:									
Prop, stull, or timber-----	-	-	1	10	11	11	150	28	39
Rock or waste-----	-	-	-	2	2	2	-	6	6
Rail-----	-	-	-	10	10	10	-	13	13
Wire or wire rope-----	-	-	-	3	3	3	-	26	26
Rock-bolting material-----	-	-	-	1	1	1	-	4	4
Flying particle while handling material-----	-	-	-	8	8	8	-	6	6
All other-----	-	-	1	35	36	36	300	15	23
Handtools:									
Axe, hatchet, or adz-----	-	-	-	2	2	2	-	5	5
Hammer or sledge-----	-	-	-	3	3	3	-	34	34
Crowbar or bar-----	-	-	-	1	1	1	-	5	5
Flying particle from tool or object worked on-----	-	-	-	3	3	3	-	4	4
All other-----	-	-	-	7	7	7	-	10	10
Stepping or kneeling on sharp or loose objects:									
Stepping on sharp object-----	-	-	-	2	2	2	-	12	12
Stepping on loose object-----	-	-	-	8	8	8	-	44	44
Striking or bumping against objects-----	-	-	-	3	3	3	-	12	12
Haulage:									
Cages, cars, or motors:									
Squeezed between cage, car, or motor, and other object----	-	-	-	1	1	1	-	22	22
Falling, slipping, or jumping into or from-----	-	-	-	1	1	1	-	1	1
Shuttle cars, transloaders, and small mobile trucks:									
Struck or run over-----	-	-	-	3	3	3	-	61	61
Railroad cars and locomotives-----	-	-	-	2	2	2	-	58	58
Automobiles, gasoline or diesel trucks:									
While operating-----	-	-	-	8	8	8	-	28	28
Slip or fall on or from-----	-	-	-	4	4	4	-	3	3
Miscellaneous haulage:									
Rope or cable on haulage-----	-	-	-	1	1	1	-	17	17
Slip or strain from moving car by hand-----	-	-	-	2	2	2	-	10	10
Riding or getting on or off conveyor belt-----	-	-	-	1	1	1	-	5	5
All other-----	-	-	-	3	3	3	-	5	5
Electricity:									
Power or lighting circuit-----	-	-	1	-	1	1	3,000	-	3,000
Cut-out switch or junction box-----	-	-	-	1	1	1	-	30	30
Machinery:									
Power drill; rotary or percussive-----	-	-	-	2	2	2	-	16	16
Power shovel, dragline, bulldozer, etc.-----	-	-	-	5	5	5	-	38	38
Stationary machinery-----	-	-	1	6	7	7	60	22	28
While moving any machine except mining or loading-----	1	-	-	2	2	3	-	4	2,003
Particle set in motion by machinery-----	-	-	-	4	4	4	-	10	10
All other-----	-	-	-	3	3	3	-	19	19
Miscellaneous causes:									
Flying particle from draft or wind-----	-	-	-	2	2	2	-	2	2
Acetylene or electric welding or cutting-----	-	-	-	4	4	4	-	3	3
Irritation or burn from caustic or acid-----	-	-	-	2	2	2	-	10	10
Burn from controlled fire-----	-	-	-	3	3	3	-	46	46
All other-----	-	-	-	2	2	2	-	14	14
Total or average, surface at underground-----	1	-	5	221	226	227	762	28	70
Total or average, underground mines-----	44	1	66	2,822	2,889	2,933	535	26	129

TABLE A-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1970 - Continued

General work location and detailed cause of injury	Injuries						Average severity			
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries	
		Permanent		Temporary total	Total non-fatal					
		Total	Partial							
OPEN PIT MINES										
Falls of face or side:										
While mining-----	3	-	-	3	3	6	-	14	3,007	
While loading-----	-	-	-	3	3	3	-	128	128	
All other-----	-	-	-	1	1	1	-	97	97	
Sliding or falling material or objects:										
Dropped or thrown by coworker-----	-	-	-	1	1	1	-	10	10	
From car, bin, platform, or chute-----	-	-	-	4	4	4	-	75	75	
Falling equipment or machinery under repair-----	-	-	1	7	8	8	150	41	54	
From stockpile, dump, or gob-----	-	-	-	3	3	3	-	5	5	
All other-----	-	-	-	5	5	5	-	23	23	
Slips or falls of persons:										
On same level:										
While escaping another hazard-----	-	-	-	1	1	1	-	3	3	
While handling material-----	-	-	-	21	21	21	-	28	28	
While operating or moving machinery-----	-	-	-	10	10	10	-	71	71	
All other-----	-	-	1	31	32	32	1,500	32	78	
From an elevation:										
While escaping another hazard-----	-	-	-	1	1	1	-	1	1	
While handling material-----	-	-	-	16	16	16	-	56	56	
Caused by handtool slipping or breaking-----	-	-	-	1	1	1	-	143	143	
While operating or moving machinery-----	-	-	1	21	22	22	300	50	61	
Caused by failure of scaffold, ladder, or other support-----	1	-	-	5	5	6	-	59	1,050	
All other-----	-	-	-	29	29	29	-	41	41	
Handling material:										
Prop, stull, or timber-----	-	-	-	12	12	12	-	60	60	
Rock or waste-----	-	-	-	5	5	5	-	42	42	
Rail-----	-	-	-	3	3	3	-	15	15	
Wire or wire rope-----	-	-	-	16	16	16	-	37	37	
Flying particle while handling material-----	-	-	1	3	4	4	1,800	9	457	
All other-----	2	-	3	97	100	102	157	22	143	
Handtools:										
Hammer or sledge-----	-	-	-	4	4	4	-	12	12	
Crowbar or bar-----	-	-	-	5	5	5	-	10	10	
Shovel-----	-	-	-	1	1	1	-	5	5	
Handtool used to install rock bolt-----	-	-	-	2	2	2	-	38	38	
In hand of fellow worker-----	-	-	1	1	2	2	1,800	1	900	
Flying particle from tool or object worked on-----	-	-	1	6	7	7	1,800	12	267	
All other-----	-	-	-	5	5	5	-	12	12	
Stepping or kneeling on sharp or loose objects: Stepping on loose object-----	-	-	-	20	20	20	-	25	25	
Striking or bumping against objects-----	-	-	-	2	2	2	-	33	33	
Haulage:										
Skips, cars, or motors:										
Struck, run over, or squeezed between: Operating or riding-----	-	-	1	-	1	1	129	-	129	
Falling, slipping, or jumping into or from-----	-	-	1	2	3	3	240	28	99	
Shuttle cars, transloaders, and small mobile trucks:										
Struck or run over-----	-	-	-	1	1	1	-	30	30	
All other-----	-	-	-	1	1	1	-	4	4	
Railroad cars and locomotives-----	-	-	-	4	4	4	-	42	42	
Automobiles, gasoline or diesel trucks:										
While operating-----	1	-	4	74	78	79	880	63	179	
Slip or fall on or from-----	-	-	-	36	36	36	-	34	34	
Miscellaneous haulage:										
Riding or getting on or off conveyor belt-----	-	-	-	1	1	1	-	231	231	
Flying particle-----	-	-	-	4	4	4	-	18	18	
All other-----	-	-	-	4	4	4	-	10	10	
Explosives-----	-	-	-	2	2	2	-	2	2	
Electricity:										
Power or lighting circuit-----	3	-	-	1	1	4	-	240	4,560	
Locomotive or shuttle car-----	-	-	-	1	1	1	-	4	4	
Mining or loading machine-----	-	-	-	1	1	1	-	32	32	
All other-----	-	-	-	1	1	1	-	45	45	
Machinery:										
Belt conveyor-----	-	-	2	2	4	4	232	29	131	
Mucking machine, mechanical loader-----	-	-	1	6	7	7	600	12	96	
Power drill; rotary or percussive-----	-	-	-	8	8	8	-	40	40	
Power shovel, dragline, bulldozer, etc-----	3	-	1	38	39	42	625	40	480	
Stationary machinery-----	-	-	2	11	13	13	180	56	75	
While moving any machine except mining or loading-----	-	-	-	9	9	9	-	25	25	
Particle set in motion by machinery-----	-	-	-	7	7	7	-	24	24	
All other-----	-	-	3	5	8	8	75	16	38	
Fires or suffocation from fires: Oil, gasoline, other flammable liquid-----	-	-	-	1	1	1	-	34	34	
Miscellaneous causes:										
Flying particle from draft or wind-----	-	-	-	1	1	1	-	4	4	
Acetylene or electric welding or cutting-----	-	-	-	5	5	5	-	11	11	
Irritation or burn from caustic or acid-----	-	-	-	1	1	1	-	59	59	
Burn from controlled fire-----	-	-	-	11	11	11	-	16	16	
All other-----	-	-	-	3	3	3	-	4	4	
Total or average, open pit-----	13	-	24	586	610	623	583	37	183	

TABLE A-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause - 1970 - Continued

General work location and detailed cause of injury	Injuries						Average severity			
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries	
		Permanent		Temporary total	Total non-fatal					
		Total	Partial							
OTHER SURFACE MINING										
Slips or falls of persons:										
On same level-----	-	-	-	2	2	2	-	20	20	
From an elevation:										
While handling material-----	-	-	-	2	2	2	-	1	1	
All other-----	-	-	-	1	1	1	-	2	2	
Handling material-----	-	-	1	7	8	8	100	3	15	
Handtools-----	-	-	-	1	1	1	-	2	2	
Stepping or kneeling on sharp or loose objects: Stepping on loose object-----	-	-	-	1	1	1	-	5	5	
Striking or bumping against objects-----	-	-	-	1	1	1	-	1	1	
Haulage:										
Automobiles, gasoline or diesel trucks: While operating-----	-	-	-	1	1	1	-	36	36	
Machinery:										
Power drill; rotary or percussive-----	-	-	-	1	1	1	-	4	4	
Stationary machinery-----	-	-	2	1	3	3	295	12	201	
Particle set in motion by machinery-----	-	-	-	1	1	1	-	2	2	
Total or average, other surface mining-----	-	-	3	19	22	22	230	7	37	
Total or average, mining-----	57	1	93	3,427	3,521	3,578	537	28	138	
MILLS										
Sliding or falling material or objects:										
Dropped or thrown by coworker-----	-	-	-	2	2	2	-	2	2	
From car, bin, platform, or chute-----	-	-	-	6	6	6	-	7	7	
Falling equipment or machinery under repair-----	-	-	-	5	5	5	-	25	25	
All other-----	1	-	-	10	10	11	-	57	597	
Slips or falls of persons:										
On same level:										
While escaping another hazard-----	-	-	-	1	1	1	-	17	17	
While handling material-----	-	-	1	33	34	34	960	22	50	
Caused by handtool slipping or breaking-----	-	-	-	5	5	5	-	60	60	
While operating or moving machinery-----	-	-	-	3	3	3	-	70	70	
All other-----	-	-	1	52	53	53	300	21	27	
From an elevation:										
While handling material-----	-	-	-	20	20	20	-	48	48	
Caused by handtool slipping or breaking-----	-	-	-	1	1	1	-	5	5	
While operating or moving machinery-----	-	-	-	10	10	10	-	71	71	
Caused by failure of scaffold, ladder, or other support-----	-	-	-	4	4	4	-	8	8	
All other-----	-	-	1	58	59	59	750	37	49	
Handling material:										
Prop, stull, or timber-----	-	-	-	8	8	8	-	12	12	
Ore, valuable mineral-----	1	-	-	2	2	3	-	86	2,057	
Rock or waste-----	-	-	-	10	10	10	-	33	33	
Rail-----	-	-	-	23	23	23	-	34	34	
Wire or wire rope-----	-	-	2	3	5	5	175	45	97	
Rock-bolting material-----	-	-	-	1	1	1	-	1	1	
Flying particle while handling material-----	-	-	1	15	16	16	1,800	18	130	
All other-----	-	-	3	141	144	144	77	24	25	
Handtools:										
Axe, hatchet, or adz-----	-	-	-	1	1	1	-	30	30	
Hammer or sledge-----	-	-	-	7	7	7	-	13	13	
Crowbar or bar-----	-	-	1	7	8	8	100	16	27	
In hand of fellow worker-----	-	-	-	2	2	2	-	36	36	
Flying particle from tool or object worked on-----	-	-	1	3	4	4	1,800	9	457	
All other-----	-	-	-	5	5	5	-	11	11	
Stepping or kneeling on sharp or loose objects:										
Stepping on sharp object-----	-	-	-	2	2	2	-	11	11	
Stepping on loose object-----	-	-	-	16	16	16	-	27	27	
While working on bands and knees-----	-	-	-	1	1	1	-	3	3	
Striking or bumping against objects-----	-	-	-	14	14	14	-	32	32	
Haulage:										
Cages, cars, or motors:										
Struck, run over, or squeezed between-----	-	-	-	1	1	1	-	3	3	
Rerailling-----	-	-	-	2	2	2	-	8	8	
Shuttle cars, transloaders, and small mobile trucks-----	-	-	-	2	2	2	-	22	22	
Railroad cars and locomotives-----	1	-	1	7	8	9	300	56	743	
Automobiles, gasoline or diesel trucks:										
While operating-----	1	-	-	8	8	9	-	66	726	
Slip or fall on or from-----	-	-	-	7	7	7	-	50	50	
Miscellaneous haulage:										
Coupling or uncoupling (cars not moving)-----	-	-	-	1	1	1	-	4	4	
All other-----	-	-	-	6	6	6	-	32	32	
Electricity: Cut-out switch or junction box-----	-	-	-	5	5	5	-	27	27	
Machinery:										
Belt conveyor-----	-	-	2	14	16	16	2,700	28	362	
Chain, bucket, shaker, or screw conveyor-----	-	-	-	1	1	1	-	2	2	
Mucking machine, mechanical loader-----	-	-	-	1	1	1	-	18	18	
Power drill; rotary or percussive-----	-	-	-	8	8	8	-	11	11	
Power shovel, dragline, bulldozer, etc.-----	1	-	1	15	16	17	450	37	412	
Stationary machinery-----	3	-	13	32	45	48	670	26	574	
While moving any machine except mining or loading-----	-	-	-	4	4	4	-	10	10	
Particle set in motion by machinery-----	-	-	-	10	10	10	-	8	8	
All other-----	-	-	2	3	5	5	275	2	111	
Suffocation (no flame or smoldering): Foreign gas-----	-	-	-	15	15	15	-	38	38	
Fires or suffocation from fires:										
Oil, gasoline, other flammable liquid-----	-	-	-	1	1	1	-	4	4	
All other-----	-	-	-	1	1	1	-	2	2	

TABLE A-2. - Number and average severity of injuries by degree at metal mines and mills in the United States,
by general work location and detailed cause, 1970 - Continued

General work location and detailed cause of injury	Injuries						Average severity		
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries
		Permanent		Temporary total	Total non-fatal				
		Total	Partial						
MILLS - Continued									
Miscellaneous causes:									
Flying particle from draft or wind-----	-	-	-	2	2	2	-	14	14
Acetylene or electric welding or cutting-----	-	-	-	10	10	10	-	24	24
Irritation or burn from caustic or acid-----	-	-	-	45	45	45	-	31	31
Burn from controlled fire-----	-	-	-	16	16	16	-	13	13
All other-----	-	-	-	4	4	4	-	11	11
Total or average, mills-----	8	-	30	692	722	730	723	28	122
Grand total or average-----	65	1	123	4,119	4,243	4,308	583	28	135

TABLE A-3. - Fatal injuries and distribution by part of body injured at metal mines and mills in the United States, by general work location and detailed cause, 1970

General work location and detailed cause	Injuries										Percentage distribution
	Head, face, neck (excl. eye)	Eye	Trunk	Arm (above wrist)	Wrist, hand, fingers	Leg (above ankle)	Ankle, foot, toes	Multiple	Unclassified (no data)	Total	
UNDERGROUND MINES											
Underground (including shaft and slope):											
Falls of roof or back:											
While mining-----	3	-	3	-	-	-	-	2	-	8	18.60
While loading-----	-	-	-	-	-	-	-	1	-	1	2.33
While testing or barring down back-----	-	-	-	-	-	-	-	1	-	1	2.33
While setting or removing timber or other support-----	1	-	1	-	-	-	-	1	-	3	6.98
Inrush of water-----	1	-	-	-	-	-	-	-	-	1	2.33
Slips or falls of persons:											
From an elevation:											
While handling material-----	-	-	-	-	-	-	-	1	-	1	2.33
Down shaft or slope-----	-	-	-	-	-	-	-	2	-	2	4.65
Caused by failure of scaffold, ladder, or other support-----	-	-	-	-	-	-	-	1	-	1	2.33
All other-----	-	-	1	-	-	-	-	-	-	1	2.33
Handling material: Ore, valuable mineral-----	-	-	1	-	-	-	-	-	-	1	2.33
Haulage:											
Cages, cars, or motors:											
Struck, run over, or squeezed between-----	-	-	1	-	-	-	-	1	-	2	4.65
Squeezed between cage, car, or motor, and other object:											
Operating or riding-----	1	-	1	-	-	-	-	-	-	2	4.65
Derailment-----	-	-	-	-	-	-	-	1	-	1	2.33
Collision (while under control)-----	-	-	-	-	1	-	-	-	-	1	2.33
Falling, slipping, or jumping into or from-----	1	-	-	-	-	-	-	-	-	1	2.33
Shuttle cars, transloaders, and small mobile trucks:											
Struck or run over-----	-	-	1	-	-	-	-	-	-	1	2.33
Squeezed between shuttle car, transloader, or small mobile truck, and other object-----	-	-	-	-	-	-	-	1	-	1	2.33
All other-----	-	-	-	-	-	-	-	1	-	1	2.33
Automobiles, gasoline or diesel trucks: While operating-----	-	-	-	-	-	-	-	1	-	1	2.33
Miscellaneous haulage-----	1	-	-	-	-	-	-	-	-	1	2.33
Explosives:											
Premature shot or blast-----	-	-	-	-	-	-	-	1	-	1	2.33
Flying fragments-----	1	-	-	-	-	-	-	-	-	1	2.33
Electricity: Trolley wire or pole-----	-	-	-	-	-	-	-	2	-	2	4.65
Machinery:											
Mucking machine, mechanical loader-----	-	-	1	-	-	-	-	-	-	1	2.33
Power shovel, dragline, bulldozer, etc.-----	-	-	1	-	-	-	-	1	-	2	4.65
Stationary machinery-----	1	-	-	-	-	-	-	-	-	1	2.33
Suffocation (no flame or smoldering): Foreign gas-----	-	-	3	-	-	-	-	-	-	3	6.98
Total, underground-----	10	-	14	-	1	-	-	18	-	43	-
Percentage distribution-----	23.26	-	32.56	-	2.33	-	-	41.86	-	-	-
Surface at underground:											
Machinery: While moving any machine except mining or loading---	-	-	1	-	-	-	-	-	-	1	100.00
Total, surface at underground-----	-	-	1	-	-	-	-	-	-	1	-
Percentage distribution-----	-	-	100.00	-	-	-	-	-	-	-	-
Total, underground mines-----	10	-	15	-	1	-	-	18	-	44	-
Percentage distribution-----	22.73	-	34.09	-	2.27	-	-	40.91	-	-	-
ALL SURFACE MINES											
Falls of face or side: While mining-----	-	-	3	-	-	-	-	-	-	3	23.08
Slips or falls of persons:											
From an elevation: Caused by failure of scaffold, ladder, or other support-----	-	-	-	-	-	-	-	1	-	1	7.69
Handling material-----	1	-	1	-	-	-	-	-	-	2	15.38
Haulage:											
Automobiles, gasoline or diesel trucks: While operating-----	1	-	-	-	-	-	-	-	-	1	7.69
Electricity: Power or lighting circuit-----	-	-	-	-	-	-	-	3	-	3	23.08
Machinery: Power shovel, dragline, bulldozer, etc.-----	-	-	1	-	-	-	-	2	-	3	23.08
Total, surface mines-----	2	-	5	-	-	-	-	6	-	13	-
Percentage distribution-----	15.38	-	38.46	-	-	-	-	46.15	-	-	-
Total, mining-----	12	-	20	-	1	-	-	24	-	57	-
Percentage distribution-----	21.05	-	35.09	-	1.75	-	-	42.11	-	-	-

TABLE A-3. - Fatal injuries and distribution by part of body injured at metal mines and mills in the United States,
by general work location and detailed cause, 1970 - Continued

General work location and detailed cause	Injuries									Percentage distribution	
	Head, face, neck (excl. eye)	Eye	Trunk	Arm (above wrist)	Wrist, hand, fingers	Leg (above ankle)	Ankle, foot, toes	Multiple	Unclassified (no data)		Total
MILLS											
Sliding or falling material or objects-----	1	-	-	-	-	-	-	-	-	1	12.50
Handling material: Ore, valuable mineral-----	1	-	-	-	-	-	-	-	-	1	12.50
Haulage:											
Railroad cars and locomotives-----	1	-	-	-	-	-	-	-	-	1	12.50
Automobiles, gasoline or diesel trucks:											
While operating-----	-	-	-	-	-	-	-	1	-	1	12.50
Machinery:											
Power shovel, dragline, bulldozer, etc.-----	-	-	1	-	-	-	-	-	-	1	12.50
Stationary machinery-----	-	-	-	-	-	-	1	2	-	3	37.50
Total, mills-----	3	-	1	-	-	-	1	3	-	8	-
Percentage distribution-----	37.50	-	12.50	-	-	-	12.50	37.50	-	-	-
Grand total-----	15	-	21	-	1	-	1	27	-	65	-
Percentage distribution-----	23.08	-	32.31	-	1.54	-	1.54	41.54	-	-	-

TABLE A-4. - Injuries, distribution, average severity by degree, and injury rates at metal mines and mills in the United States, by general work location and part of body injured, 1970

General work location and part of body injured	Injuries						Percentage distribution of all injuries ^{1/}	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Perma- nent partial	Tempo- rary total	All injuries	Fatal	Non- fatal	Fatal	Non- fatal
		Permanent		Tempo- rary total	Total non- fatal									
		Total	Partial											
UNDERGROUND MINES														
Underground (including shaft and slope):														
Head, face, neck (excl. eye)-----	10	-	1	143	144	154	5.9	68	18	407	0.22	3.21	1,337	60
Eye-----	-	-	4	164	168	168	6.4	1,535	6	42	-	3.74	-	158
Trunk-----	14	1	9	691	701	715	27.2	817	29	164	.31	15.62	1,872	736
Arm (above wrist)-----	-	-	1	98	99	99	3.8	450	36	40	-	2.21	-	89
Wrist, hand, fingers-----	1	-	32	425	457	458	17.4	221	21	48	.02	10.18	134	356
Leg (above ankle)-----	-	-	6	303	309	309	11.7	709	37	50	-	6.89	-	342
Ankle, foot, toes-----	-	-	6	500	506	506	19.2	551	24	30	-	11.28	-	343
Multiple-----	18	-	2	201	203	221	8.4	1,425	38	536	.40	4.52	2,407	234
Unclassified (no data)-----	-	-	-	76	76	76	-	-	24	24	-	1.69	-	40
Total or average-----	43	1	61	2,601	2,663	2,706	-	516	26	134	.96	59.34	5,749	2,358
Surface at underground:														
Head, face, neck (excl. eye)-----	-	-	-	11	11	11	5.0	-	29	29	-	.87	-	25
Eye-----	-	-	-	16	16	16	7.2	-	5	5	-	1.26	-	7
Trunk-----	1	-	1	69	70	71	32.0	300	39	127	.08	5.52	473	238
Arm (above wrist)-----	-	-	-	5	5	5	2.3	-	28	28	-	.39	-	11
Wrist, hand, fingers-----	-	-	3	34	37	37	16.7	170	13	26	-	2.92	-	75
Leg (above ankle)-----	-	-	-	26	26	26	11.7	-	29	29	-	2.05	-	60
Ankle, foot, toes-----	-	-	-	43	43	43	19.4	-	27	27	-	3.39	-	91
Multiple-----	-	-	1	12	13	13	5.9	3,000	33	261	-	1.03	-	268
Unclassified (no data)-----	-	-	-	5	5	5	-	-	15	15	-	.39	-	6
Total or average-----	1	-	5	221	226	227	-	762	28	70	.08	17.83	473	781
Total or average, underground mines-----	44	1	66	2,822	2,889	2,933	-	535	26	129	.76	50.20	4,588	2,010
OPEN PIT MINES														
Head, face, neck (excl. eye)-----	2	-	-	37	37	39	6.4	-	34	340	.04	.75	244	21
Eye-----	-	-	3	14	17	17	2.8	1,800	11	327	-	.35	-	113
Trunk-----	5	-	1	192	193	198	32.5	129	37	188	.10	3.92	609	149
Arm (above wrist)-----	-	-	1	23	24	24	3.9	180	46	51	-	.49	-	25
Wrist, hand, fingers-----	-	-	14	83	97	97	15.9	238	22	53	-	1.97	-	105
Leg (above ankle)-----	-	-	2	78	80	80	13.1	2,250	59	114	-	1.62	-	185
Ankle, foot, toes-----	-	-	3	102	105	105	17.2	150	29	32	-	2.13	-	69
Multiple-----	6	-	-	44	44	50	8.2	-	52	765	.12	.89	731	46
Unclassified (no data)-----	-	-	-	13	13	13	-	-	45	45	-	.26	-	12
Total or average-----	13	-	24	586	610	623	-	583	37	183	.26	12.39	1,584	729
OTHER SURFACE MINING														
Head, face, neck (excl. eye)-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eye-----	-	-	-	1	1	1	5.3	-	2	2	-	.99	-	2
Trunk-----	-	-	-	4	4	4	21.1	-	10	10	-	3.97	-	41
Arm (above wrist)-----	-	-	-	2	2	2	10.5	-	3	3	-	1.98	-	6
Wrist, hand, fingers-----	-	-	3	7	10	10	52.6	230	10	76	-	9.91	-	752
Leg (above ankle)-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ankle, foot, toes-----	-	-	-	2	2	2	10.5	-	2	2	-	1.98	-	4
Multiple-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified (no data)-----	-	-	-	3	3	3	-	-	1	1	-	2.97	-	3
Total or average-----	-	-	3	19	22	22	-	230	7	37	-	21.81	-	807
Total or average, mining-----	57	1	93	3,427	3,521	3,578	-	537	28	138	.53	32.66	3,173	1,414
MILLS														
Head, face, neck (excl. eye)-----	3	-	-	31	31	34	4.7	-	31	558	.05	.54	314	17
Eye-----	-	-	2	45	47	47	6.5	1,800	6	83	-	.82	-	68
Trunk-----	1	-	3	222	225	226	31.1	670	27	62	.02	3.93	105	141
Arm (above wrist)-----	-	-	3	29	32	32	4.4	1,950	35	215	-	.56	-	120
Wrist, hand, fingers-----	-	-	20	105	125	125	17.2	264	21	60	-	2.18	-	130
Leg (above ankle)-----	-	-	2	96	98	98	13.5	2,475	41	91	-	1.71	-	155
Ankle, foot, toes-----	1	-	-	123	123	124	17.1	-	27	75	.02	2.15	105	58
Multiple-----	3	-	-	38	38	41	5.6	-	44	480	.05	.66	314	29
Unclassified (no data)-----	-	-	-	3	3	3	-	-	44	44	-	.05	-	2
Total or average, mills-----	8	-	30	692	722	730	-	723	28	122	.14	12.60	838	721
Grand total or average-----	65	1	123	4,119	4,243	4,308	-	583	28	135	.39	25.70	2,362	1,173

^{1/} Number of injuries for which part of body is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for underground is 2,630; for surface 222; for open pit 610; for other surface mining 19; and for mills 727. Distribution percentages may not add to 100.0 because of independent rounding.

TABLE A-5. - Injuries, distribution, average severity by degree, and injury rates at metal mines and mills in the United States, by general work location and nature of injury, 1970

General work location and nature of injury	Injuries						Percentage distribution of all injuries ^{1/}	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Non-fatal	Fatal	Non-fatal
		Permanent		Temporary total	Total non-fatal									
		Total	Partial											
UNDERGROUND MINES														
Underground (including shaft and slope):														
Amputation, enucleation-----	1	-	34	-	34	35	1.3	321	-	483	0.02	0.76	134	243
Asphyxiation-----	4	-	-	20	20	24	.9	-	7	1,006	.09	.45	535	3
Crushing, contusion, bruise-----	17	-	4	872	876	893	34.0	722	16	133	.38	19.52	2,273	372
Burn, scald (except chemical)-----	-	-	-	16	16	16	.6	-	20	20	-	.36	-	7
Chemical burn-----	-	-	-	27	27	27	1.0	-	7	7	-	.60	-	4
Radiation, radiating substance-----	-	-	-	9	9	9	.3	-	4	4	-	.20	-	1
Cut, laceration, puncture-----	-	-	2	365	367	367	14.0	342	18	19	-	8.18	-	158
Dermatitis-----	-	-	-	4	4	4	.2	-	13	13	-	.09	-	1
Drowning-----	1	-	-	-	-	1	(2)	-	-	6,000	.02	-	134	-
Electric shock-----	2	-	-	-	-	2	.1	-	-	6,000	.04	-	267	-
Foreign body in eye-----	-	-	3	147	150	150	5.7	1,447	6	35	-	3.34	-	116
Fracture-----	17	1	8	466	475	492	18.7	613	68	294	.38	10.59	2,273	948
Heat exhaustion, sunstroke-----	-	-	-	11	11	11	.4	-	3	3	-	.25	-	1
Hernia (inguinal)-----	-	-	-	23	23	23	.9	-	41	41	-	.51	-	21
Poisoning (systemic)-----	-	-	-	2	2	2	.1	-	10	10	-	.04	-	(3)
Strain, sprain, dislocation-----	-	-	6	540	546	546	20.8	405	21	26	-	12.17	-	311
Pneumoconiosis (except silicosis)-----	-	-	2	1	3	3	.1	1,650	17	1,106	-	.07	-	74
Concussion (cerebral)-----	1	-	-	9	9	10	.4	-	14	613	.02	.20	134	3
Hernia (except inguinal)-----	-	-	-	7	7	7	.3	-	33	33	-	.16	-	5
Inflammation or irritation of joints, tendons, muscles-----	-	-	-	4	4	4	.2	-	38	38	-	.09	-	3
Hearing loss, impairment-----	-	-	1	2	3	3	.1	68	7	27	-	.07	-	2
Other, not elsewhere classified-----	-	-	1	-	1	1	(2)	1,950	-	1,950	-	.02	-	43
Unclassified (no data)-----	-	-	-	76	76	76	-	-	24	24	-	1.69	-	40
Total or average-----	43	1	61	2,601	2,663	2,706	-	516	26	134	.96	59.34	5,749	2,358
Surface at underground:														
Amputation, enucleation-----	-	-	1	-	1	1	.5	60	-	60	-	.08	-	5
Crushing, contusion, bruise-----	1	-	-	58	58	59	26.6	-	17	119	.08	4.58	473	79
Burn, scald (except chemical)-----	-	-	-	6	6	6	2.7	-	28	28	-	.47	-	13
Chemical burn-----	-	-	-	2	2	2	.9	-	10	10	-	.16	-	1
Radiation, radiating substance-----	-	-	-	3	3	3	1.4	-	2	2	-	.24	-	(3)
Cut, laceration, puncture-----	-	-	-	24	24	24	10.8	-	9	9	-	1.89	-	18
Electric shock-----	-	-	1	1	2	2	.9	3,000	30	1,515	-	.16	-	239
Foreign body in eye-----	-	-	-	14	14	14	6.3	-	6	6	-	1.10	-	7
Fracture-----	-	-	2	39	41	41	18.5	225	49	58	-	3.24	-	187
Hernia (inguinal)-----	-	-	-	1	1	1	.5	-	44	44	-	.08	-	3
Poisoning (systemic)-----	-	-	-	1	1	1	.5	-	25	25	-	.08	-	2
Strain, sprain, dislocation-----	-	-	1	66	67	67	30.2	300	34	38	-	5.29	-	203
Hernia (except inguinal)-----	-	-	-	1	1	1	.5	-	225	225	-	.08	-	18
Unclassified (no data)-----	-	-	-	5	5	5	-	-	15	15	-	.39	-	6
Total or average-----	1	-	5	221	226	227	-	762	28	70	.08	17.83	473	781
Total or average, underground mines-----														
	44	1	66	2,822	2,889	2,933	-	535	26	129	.76	50.20	4,588	2,010
OPEN PIT MINES														
Amputation, enucleation-----	-	-	16	-	16	16	2.6	455	-	455	-	.32	-	148
Asphyxiation-----	4	-	-	-	-	4	.7	-	-	6,000	.08	-	487	-
Crushing, contusion, bruise-----	-	-	-	136	136	136	22.3	-	26	26	-	2.76	-	72
Burn, scald (except chemical)-----	-	-	-	15	15	15	2.5	-	35	35	-	.30	-	11
Chemical burn-----	-	-	-	1	1	1	.2	-	59	59	-	.02	-	1
Radiation, radiating substance-----	-	-	-	5	5	5	.8	-	4	4	-	.10	-	(3)
Cut, laceration, puncture-----	-	-	1	56	57	57	9.3	390	17	23	-	1.16	-	27
Dermatitis-----	-	-	-	1	1	1	.2	-	6	6	-	.02	-	(3)
Electric shock-----	3	-	-	1	1	4	.7	-	45	4,511	.06	.02	366	1
Foreign body in eye-----	-	-	2	9	11	11	1.8	1,800	10	335	-	.22	-	75
Fracture-----	5	-	3	127	130	135	22.1	360	73	299	.10	2.64	609	211
Heat exhaustion, sunstroke-----	-	-	-	2	2	2	.3	-	6	6	-	.04	-	(3)
Hernia (inguinal)-----	-	-	-	3	3	3	.5	-	37	37	-	.06	-	2
Strain, sprain, dislocation-----	1	-	2	211	213	214	35.1	814	30	65	.02	4.33	122	160
Concussion (cerebral)-----	-	-	-	1	1	1	.2	-	3	3	-	.02	-	(3)
Hernia (except inguinal)-----	-	-	-	5	5	5	.8	-	84	84	-	.10	-	9
Unclassified (no data)-----	-	-	-	13	13	13	-	-	45	45	-	.26	-	12
Total or average-----	13	-	24	586	610	623	-	583	37	183	.26	12.39	1,584	729

^{1/} Number of injuries for which nature of injury is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for underground is 2,630; for surface 222; for open pit 610; for other surface mining 19; and for mills 727. Distribution percentages may not add to 100.0 because of independent rounding.

^{2/} Less than 0.05.

^{3/} Less than 0.5.

TABLE A-5. - Injuries, distribution, average severity by degree, and injury rates at metal mines and mills in the United States, by general work location and nature of injury, 1970 - Continued

General work location and nature of injury	Injuries						Percent- age distrib- ution of all injuries y	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Perma- nent partial	Tempo- rary total	All injuries	Fatal	Non- fatal	Fatal	Non- fatal
		Permanent		Tempo- rary total	Total non- fatal									
		Total	Partial											
OTHER SURFACE MINING														
Amputation, enucleation-----	-	-	2	-	2	2	10.5	300	-	300	-	1.98	-	595
Crushing, contusion, bruise-----	-	-	1	3	4	4	21.1	90	3	25	-	3.97	-	98
Burn, scald (except chemical)-----	-	-	-	1	1	1	5.3	-	1	1	-	.99	-	1
Cut, laceration, puncture-----	-	-	-	5	5	5	26.3	-	11	11	-	4.96	-	54
Foreign body in eye-----	-	-	-	1	1	1	5.3	-	2	2	-	.99	-	2
Fracture-----	-	-	-	3	3	3	15.8	-	14	14	-	2.97	-	41
Strain, sprain, dislocation-----	-	-	-	3	3	3	15.8	-	5	5	-	2.97	-	14
Unclassified (no data)-----	-	-	-	3	3	3	-	-	1	1	-	2.97	-	3
Total or average-----	-	-	3	19	22	22	-	230	7	37	-	21.81	-	807
Total or average, mining-----	57	1	93	3,427	3,521	3,578	-	537	28	138	.53	32.66	3,173	1,414
MILLS														
Amputation, enucleation-----	1	-	17	-	17	18	2.5	885	-	1,169	.02	.30	105	263
Asphyxiation-----	-	-	-	4	4	4	.6	-	51	51	-	.07	-	4
Crushing, contusion, bruise-----	2	-	4	150	154	156	21.5	412	16	103	.03	2.69	209	70
Burn, scald (except chemical)-----	-	-	-	22	22	22	3.0	-	15	15	-	.38	-	6
Chemical burn-----	-	-	-	45	45	45	6.2	-	31	31	-	.79	-	24
Radiation, radiating substance-----	-	-	-	11	11	11	1.5	-	24	24	-	.19	-	5
Cut, laceration, puncture-----	-	-	2	70	72	72	9.9	240	11	18	-	1.26	-	22
Dermatitis-----	-	-	-	2	2	2	.3	-	66	66	-	.03	-	2
Foreign body in eye-----	-	-	1	25	26	26	3.6	1,800	3	73	-	.45	-	33
Fracture-----	5	-	4	105	109	114	15.7	365	61	332	.09	1.90	524	137
Hernia (inguinal)-----	-	-	-	15	15	15	2.1	-	44	44	-	.26	-	12
Poisoning (systemic)-----	-	-	-	14	14	14	1.9	-	40	40	-	.24	-	10
Strain, sprain, dislocation-----	-	-	1	222	223	223	30.7	960	27	31	-	3.89	-	122
Concussion (cerebral)-----	-	-	-	2	2	2	.3	-	82	82	-	.03	-	3
Hernia (except inguinal)-----	-	-	1	2	3	3	.4	300	56	137	-	.05	-	7
Unclassified (no data)-----	-	-	-	3	3	3	-	-	44	44	-	.05	-	2
Total or average, mills-----	8	-	30	692	722	730	-	723	28	122	.14	12.60	838	721
Grand total or average-----	65	1	123	4,119	4,243	4,308	-	583	28	135	.39	25.70	2,362	1,173

^{1/} Number of injuries for which nature of injury is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for underground is 2,630; for surface 222; for open pit 610; for other surface mining 19; and for mills 727. Distribution percentages may not add to 100.0 because of independent rounding.

^{2/} Less than 0.05.

^{3/} Less than 0.5.

TABLE A-6. - Injury experience and worktime data on metal mines and mills in the United States, by general work location and employment size group, 1970

General work location and employment size group	Injuries		Frequency rates per million man-hours			Severity rates per million man-hours			Active operations	Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Underground mines (includes surface work):													
1-4-----	2	60	62	1.84	55.29	57.13	11,057	2,833	13,890	745	1,132	135,377	1,085,257
5-9-----	4	54	58	4.32	58.29	62.61	25,908	4,533	30,441	104	662	114,849	926,358
10-19-----	2	104	106	1.56	81.02	82.58	9,348	2,505	11,853	58	781	129,247	1,283,642
20-34-----	3	131	134	1.91	83.42	85.33	11,463	1,660	13,123	28	692	196,291	1,570,297
35-49-----	1	142	143	-	77.08	77.08	-	5,367	5,367	20	817	229,960	1,845,136
50-99-----	7	378	385	1.52	82.22	83.74	9,135	2,901	12,037	30	2,152	268,577	4,597,533
100-149-----	8	286	294	1.04	37.21	38.26	6,246	1,731	7,977	30	3,540	960,594	7,685,200
150-249-----	5	448	453	.80	71.66	72.46	4,799	2,131	6,930	15	2,977	780,054	6,251,570
250 or more-----	13	1,274	1,287	.42	41.24	41.66	2,525	1,699	4,223	22	12,759	3,860,820	30,892,617
Unassigned ¹ -----	-	12	12	-	8.50	8.50	-	190	190	-	670	176,460	1,411,686
Total or average-----	44	2,889	2,933	.76	50.20	50.97	4,588	2,010	6,598	1,052	26,182	7,189,449	57,546,296
Open pit mines:													
1-4-----	3	14	17	8.58	40.03	48.61	51,472	5,565	57,036	226	368	42,942	349,706
5-9-----	2	21	23	4.61	32.27	36.88	27,658	742	28,400	34	245	53,756	433,872
10-19-----	-	16	16	-	45.83	45.83	-	5,842	5,842	16	230	54,024	458,211
20-34-----	-	41	41	-	22.01	22.01	-	905	905	14	357	85,773	726,963
35-49-----	-	41	41	-	36.14	36.14	-	3,452	3,452	12	468	134,722	1,134,544
50-99-----	1	42	43	.24	9.89	10.12	1,412	262	1,675	26	1,853	502,019	4,248,159
100-149-----	15	52	67	.29	15.37	15.37	1,412	966	966	13	1,608	423,019	3,384,141
150-249-----	2	93	95	.29	13.29	13.57	1,715	623	2,337	14	2,696	874,807	6,998,465
250 or more-----	4	317	321	.13	10.66	10.79	807	592	1,399	19	10,528	3,713,091	29,747,431
Unassigned ² -----	1	-	1	.57	-	.57	3,414	-	3,414	-	657	219,676	1,757,412
Total or average-----	13	610	623	.26	12.39	12.65	1,584	729	2,313	374	19,010	6,103,829	49,238,904
Other surface mining:													
1-4-----	-	3	3	-	15.59	15.59	-	16	16	438	512	23,584	192,482
5-9-----	-	8	8	-	116.99	116.99	-	8,891	8,891	11	63	9,172	77,075
10-19-----	-	3	3	-	18.72	18.72	-	262	262	5	44	8,307	68,384
20-34-----	-	8	8	-	95.47	95.47	-	1,921	1,921	1	102	17,903	160,258
35-49-----	-	-	-	-	-	-	-	-	-	2	46	10,474	83,796
50-99-----	-	-	-	-	-	-	-	-	-	2	149	53,356	426,604
Total or average-----	-	22	22	-	21.81	21.81	-	807	807	460	916	122,766	1,008,599
Total or average, mining-----	57	3,521	3,578	.53	32.66	33.19	3,173	1,414	4,586	1,886	46,108	13,416,044	107,793,799
Mills:													
1-4-----	-	8	8	-	41.72	41.72	-	5,966	5,966	62	141	24,074	191,765
5-9-----	-	14	14	-	40.17	40.17	-	1,323	1,323	25	166	42,422	348,516
10-19-----	-	49	49	-	49.37	49.37	-	968	968	26	256	42,422	348,516
20-34-----	1	63	64	.46	29.62	29.62	2,777	661	3,438	27	238	122,800	992,600
35-49-----	2	60	62	.88	26.54	27.43	5,308	805	6,113	33	965	279,573	2,160,639
50-99-----	-	116	116	-	19.74	19.74	-	1,358	1,358	300	2,420	776,870	5,877,513
100-149-----	-	60	60	-	11.23	11.23	-	506	506	358	1,839	658,120	5,341,995
150-249-----	1	99	100	.13	12.65	12.77	766	1,040	1,806	14	2,787	978,518	7,828,353
250 or more-----	4	253	257	.12	7.83	7.96	743	518	1,261	23	11,789	4,036,887	32,295,105
Total or average, mills-----	8	722	730	.14	12.60	12.74	838	721	1,559	266	21,535	7,136,483	57,297,140
Grand total or average-----	65	4,243	4,308	.39	25.70	26.09	2,362	1,173	3,536	2,152	67,643	20,552,527	165,090,939

¹ Data on 7 surface installations that cannot be assigned to individual mines.² Data on 3 installations that cannot be assigned to individual mines.

TABLE A-7. - Injuries by degree at metal mines and mills in the United States, by State I, 1970

Injuries											
State	At mine					At mill					
	Fatal	Nonfatal			All injuries	Fatal	Nonfatal			Total non-fatal	All injuries
		Permanent		Tempo- rary total			Permanent		Tempo- rary total		
		Total	Partial				Total	Partial			
Alabama-----	-	-	1	16	17	-	-	1	9	10	10
Alaska-----	-	-	4	16	20	-	-	-	2	2	2
Arizona-----	7	-	9	617	633	1	-	3	134	137	138
Arkansas-----	-	-	-	11	11	-	-	1	39	40	40
California-----	2	-	2	124	126	1	-	-	30	30	31
Colorado-----	5	1	17	386	404	1	3	46	46	49	50
Georgia-----	-	-	-	2	2	-	-	-	-	-	-
Idaho-----	1	-	11	348	359	-	-	-	6	6	6
Illinois-----	1	-	1	5	6	-	-	-	2	2	2
Kentucky-----	-	-	-	7	7	-	-	-	-	17	18
Louisiana-----	-	-	-	-	-	1	-	-	-	-	-
Maine-----	1	-	-	15	15	-	-	-	-	-	-
Michigan-----	3	-	3	220	223	-	-	-	91	91	91
Minnesota-----	5	-	4	48	52	3	2	32	32	34	37
Missouri-----	4	-	2	351	353	-	-	-	33	33	33
Montana-----	2	-	3	139	142	-	1	28	29	29	29
Nevada-----	4	-	2	67	69	-	4	35	35	39	39
New Jersey-----	1	-	1	16	17	-	-	2	2	2	2
New Mexico-----	5	-	6	313	319	-	-	2	78	80	80
New York-----	1	-	1	45	46	-	-	4	4	4	4
North Carolina-----	-	-	3	46	49	-	-	1	4	5	5
Oklahoma-----	-	-	-	15	15	-	-	-	3	3	3
Oregon-----	1	-	-	5	5	-	-	1	1	1	1
Pennsylvania-----	1	-	1	17	18	-	-	-	2	2	2
South Dakota-----	3	-	2	88	90	-	-	-	8	8	8
Tennessee-----	2	-	9	83	92	-	-	3	8	11	11
Texas-----	2	-	1	10	11	-	-	1	38	39	39
Utah-----	2	-	8	216	224	1	2	2	15	17	18
Virginia-----	-	-	-	37	37	-	-	-	-	-	-
Washington-----	3	-	-	38	38	-	-	1	3	4	4
Wisconsin-----	-	-	-	28	28	-	-	3	6	9	9
Wyoming-----	1	-	2	98	100	-	-	1	17	18	18
Total-----	57	1	93	3,427	3,521	8	-	30	692	722	730

1/ No injuries were reported at metal mines and mills for States not listed.

TABLE A-8. - Fatal injuries by general work location and main cause at metal mines and mills in the United States, by State ¹/, 1970

State	Underground mines														Open pit mines							Mills				Grand total		
	Underground						Shaft and slope				Surface		Total, underground mines							Total, mining activities				Total, mills				
	Falls of roof or back	Slips or falls of persons	Handling material	Haulage	Explosives	Electricity	Machinery	Total, underground	Inrush of water	Slips or falls of persons	Machinery	Suffocation (no flame or smoldering)	Total, shaft and slope	Surface		Falls of face or side	Slips or falls of persons	Handling material	Haulage	Electricity	Machinery	Total, open pit	Sliding or falling material or objects	Handling material	Haulage		Machinery	Total, mills
														Machinery	Total, surface													
Arizona-----	1	1	1	2	1	1	3	3	1	2	1	1	5	1	1	5	1	2	1	1	1	1	7	1	1	1	1	1
California-----	3	1	1	1	1	1	4	4	1	1	1	1	5	1	1	5	1	1	1	1	1	1	5	1	1	1	1	1
Colorado-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Idaho-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Illinois-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Louisiana-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maine-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Michigan-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Minnesota-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Missouri-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Montana-----	2	1	1	1	1	1	2	4	1	2	2	2	4	1	2	4	1	3	1	3	1	3	1	2	1	2	1	1
Nevada-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
New Jersey-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
New Mexico-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
New York-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Oregon-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pennsylvania-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
South Dakota-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tennessee-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Texas-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Utah-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Washington-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wyoming-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total-----	13	2	1	12	2	2	3	35	1	3	1	3	8	43	1	1	44	3	1	2	1	3	3	13	57	1	1	8

¹/ No fatal injuries were reported at metal mines and mills for work locations or States not listed.

TABLE A-9. - Nonfatal injuries by general work location and main cause at metal mines and mills in the United States, by State 1, 1970

Underground mines																																
State	Underground														Shaft and slope																	
	Falls of roof or back	Pressure bumps or bursts	Falls of face or side	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or dust	Explosives	Electricity	Machinery	Suffocation (no flame or smoldering)	Fires or suffocation from fires	Miscellaneous causes	Pneumoconiosis	Total, underground	Falls of face or side	Inrush of water	Sliding or falling material or objects	Slips or falls of persons	Handling material	Haulage	Explosives	Electricity	Machinery	Miscellaneous causes	Total, shaft and slope		
Alabama-----	1	-	2	-	-	1	1	-	-	2	-	-	-	2	2	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	8
Alaska-----	30	-	43	21	60	64	14	11	-	29	-	-	-	46	1	-	-	12	-	331	3	-	6	11	9	2	-	-	10	7	48	379
Arizona-----	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4
Arkansas-----	6	-	4	2	14	2	-	-	1	6	2	1	-	11	-	-	1	-	68	-	-	-	1	-	-	-	-	-	-	-	-	69
California-----	50	-	8	14	58	82	11	12	-	40	-	4	1	73	1	-	6	-	360	-	-	1	-	-	-	-	-	-	-	-	-	361
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Georgia-----	65	3	10	15	30	89	14	6	-	36	-	2	1	71	4	-	3	-	349	1	-	-	-	-	-	-	-	-	-	-	-	350
Idaho-----	1	-	-	-	-	-	-	-	-	-	-	3	-	2	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	6
Illinois-----	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	7
Kentucky-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana-----	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine-----	20	-	27	10	19	39	5	9	1	13	-	5	-	15	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	9
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota-----	16	-	21	20	88	49	10	20	2	27	-	-	1	52	1	-	3	-	168	-	-	3	-	2	1	-	-	-	-	-	-	168
Missouri-----	13	-	12	4	14	15	5	1	2	3	-	3	-	9	-	-	-	-	310	-	-	-	-	-	-	-	-	-	-	-	-	314
Montana-----	4	-	4	-	3	8	2	1	1	5	-	-	-	5	-	-	3	-	77	-	-	-	-	2	-	-	-	-	-	-	-	79
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	40
New Jersey-----	3	-	-	-	1	6	-	-	-	1	-	2	-	5	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	17
New Mexico-----	16	-	5	12	44	55	5	2	1	22	-	6	-	54	2	1	3	-	224	-	-	2	1	2	-	-	1	-	-	-	-	230
New York-----	7	-	1	1	4	12	2	-	1	5	-	7	-	7	-	-	-	-	39	-	-	-	-	-	2	-	-	-	-	-	-	41
North Carolina-----	6	-	2	1	2	8	1	-	1	7	-	1	-	13	-	-	-	-	44	-	-	-	-	-	-	-	-	-	-	-	-	44
Oklahoma-----	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	8
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania-----	-	-	-	3	5	2	-	-	-	2	-	-	-	2	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	15
South Dakota-----	14	-	3	5	12	14	4	2	-	-	-	-	-	16	-	-	3	-	80	1	-	1	-	-	-	-	-	-	-	-	-	81
Tennessee-----	14	-	3	2	8	19	2	2	1	13	-	-	-	17	2	-	3	3	90	-	-	-	-	-	-	-	-	-	-	-	-	91
Texas-----	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4
Utah-----	23	-	8	6	24	40	8	2	-	31	-	-	-	31	2	-	4	-	179	1	-	1	1	1	1	-	1	3	2	2	11	190
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-	-	-	-	32
Washington-----	5	-	1	2	4	6	3	3	-	5	-	1	-	4	-	-	2	-	35	-	-	-	-	-	-	-	-	-	-	-	-	35
Wisconsin-----	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	24
Wyoming-----	9	-	9	1	3	9	1	4	-	3	-	-	1	12	-	-	-	-	52	-	-	-	-	-	-	-	-	-	-	-	-	53
Total-----	313	3	164	121	407	559	98	81	10	268	2	24	4	458	13	1	53	3	2,582	5	1	14	15	14	6	2	1	14	9	81	2,663	

1 No nonfatal injuries were reported at metal mines and mills for States not listed.

TABLE A-9. - Nonfatal injuries by general work location and main cause at metal mines and mills in the United States, by State $\frac{1}{2}$, 1970 - Continued

State	Underground mines - continued												Open pit mines													
	Surface												Total, underground mines													
	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Electricity	Machinery	Miscellaneous causes	Total, surface															
Alabama-----	-	1	2	1	-	-	-	-	-	-	1	9	-	-	1	2	2	-	-	2	1	-	-	-	1	8
Alaska-----	-	1	10	-	1	-	3	1	3	1	4	8	-	10	42	55	9	7	1	60	-	2	33	-	8	227
Arizona-----	-	1	2	1	-	-	-	-	-	-	7	4	-	-	1	2	3	1	1	1	-	-	7	-	3	7
California-----	1	1	2	-	-	-	-	-	2	-	7	76	-	-	10	15	3	3	9	9	-	-	-	-	-	50
Colorado-----	3	10	11	2	4	1	5	1	2	3	42	403	-	-	-	1	1	-	-	-	-	-	-	-	-	1
Georgia-----	-	4	4	1	-	-	-	-	-	-	9	359	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky-----	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	9	-	-	3	1	2	1	1	5	-	1	3	-	1	6
Maine-----	-	4	1	1	-	-	2	-	3	1	12	180	3	2	14	9	1	1	10	-	-	-	14	1	1	41
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	9	2	1	1	1	-	-	-	-	1	52
Minnesota-----	5	8	4	3	2	1	8	-	3	6	39	353	-	-	-	-	-	-	-	-	-	-	-	-	2	27
Missouri-----	-	1	1	-	-	-	-	-	2	-	5	84	-	3	16	10	1	3	14	1	1	-	8	-	2	57
Montana-----	-	-	-	-	-	-	1	-	-	-	3	43	-	-	7	7	1	-	4	-	-	-	6	-	-	25
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	1
New Jersey-----	-	6	14	6	1	-	1	-	2	1	33	263	1	1	11	13	3	2	1	14	-	1	7	-	1	55
New Mexico-----	-	-	-	-	-	-	-	-	-	-	5	44	-	-	-	-	-	-	-	-	-	2	-	-	-	2
New York-----	-	-	2	1	-	-	-	-	1	1	3	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina-----	1	2	1	-	-	-	-	-	-	-	3	18	-	-	3	4	-	-	-	-	-	-	1	-	-	4
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	3	11	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Oregon-----	-	-	-	-	-	-	-	-	-	-	3	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania-----	-	3	-	-	-	-	1	-	1	-	9	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota-----	-	1	4	1	1	-	1	-	-	-	1	92	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Tennessee-----	-	-	1	-	-	-	-	-	-	-	4	4	-	-	1	4	1	-	2	2	-	-	-	-	2	7
Texas-----	-	-	-	-	1	-	3	-	3	-	13	203	-	2	6	2	1	-	4	-	-	-	-	-	2	21
Utah-----	-	2	1	-	-	-	-	-	1	-	5	37	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Virginia-----	1	1	2	-	-	-	-	-	-	-	3	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	2	-	-	1	-	-	-	-	3	27	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Wisconsin-----	-	2	1	-	-	-	-	-	-	-	3	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	1	-	-	-	-	-	2	-	-	-	3	56	1	1	9	7	3	3	7	-	-	6	-	2	39	
Total-----	14	48	71	16	10	3	26	2	23	13	226	2,889	7	21	138	140	26	20	2	133	2	4	95	1	21	610

1/ No nonfatal injuries were reported at metal mines and mills for States not listed.

TABLE A-9. - Nonfatal injuries by general work location and main cause at metal mines and mills in the United States, by State *1/*, 1970 - Continued

State	Other surface mining							Total, mining activities	Mills												Grand total		
	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Machinery		Total, other surface mining	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Electricity	Machinery	Suffocation (no flame or smoldering)	Fires or suffocation from fires		Miscellaneous causes	Total, mills
Alabama-----	3	4	1	1	1	1	1	17	1	1	1	1	1	1	1	1	1	1	1	1	3	10	27
Alaska-----								20	6	41	44	5	2	1	3	3	1	22		1	12	137	22
Arizona-----								626	1	11	9	1	3	1	1	1	1	2	1				763
Arkansas-----								11		16	12	6	1	1	2	2	2	2	2				51
California-----								126		14	20	3		1	1	1		8	3				156
Colorado-----								404		1	2	3						5	2				49
Georgia-----								2															2
Idaho-----								359		2	2			1	1	1							6
Illinois-----								6		2													2
Indiana-----								7															8
Kentucky-----										2		4						1					7
Louisiana-----									2	2				1		1					6		17
Maine-----								15															15
Michigan-----							2	223	1	30	27	8	1	3	5	6	1	13					91
Minnesota-----								52	3	7	10	1	1	3	4	4	2	10					314
Missouri-----								353		8	10	2	1	3	1	1	2	6					34
Montana-----								142	1	9	2	7	1	1	1	1	1	4					386
Nebraska-----								69		6	7	3	1	1	1	3		8	7	1			29
Nevada-----		1						17										8					171
New Jersey-----										26	1	2						9					39
New Mexico-----								319	2		23	2	3	3	2	4	1	2					108
New York-----		1						46		1	3							1					19
North Carolina-----								49		1	1	1						1					80
Oklahoma-----								15		1	1							1					4
Oregon-----								5		1	1							1					50
Pennsylvania-----								18		1								1					54
Rhode Island-----								90	2														18
South Dakota-----								92	1	4	2	1	1	1									5
Tennessee-----								11	1	8	10					3							20
Texas-----								224	1	2	6							4					8
Utah-----								37								1							11
Virginia-----								38										4					103
Washington-----								37										4					39
West Virginia-----								28		3	2							2					50
Wisconsin-----								1			4							1					17
Wyoming-----								100	1	5	5							3					37
Total-----	5	8	1	1	1	1	5	22	3,521	23	190	209	27	19	14	35	5	106	15	2	77	722	4,243

1/ No nonfatal injuries were reported at metal mines and mills for States not listed.

TABLE A-10. - Injuries by general work location and main cause at metal mines and mills in the United States, by degree of injury and mineral industry, 1970

Degree of injury and mineral industry	Underground mines																															
	Underground										Shaft and slope																					
	Falls of roof or back	Pressure bumps or bursts	Falls of face or side	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or dust	Explosives	Electricity	Machinery	Suffocation (no flame or smoldering)	Fires or suffocation from fires	Miscellaneous causes	Pneumoconiosis	Total, underground	Falls of face or side	Inrush or water	Sliding or falling material or objects	Slips or falls of persons	Handling material	Haulage	Explosives	Electricity	Machinery	Suffocation (no flame or smoldering)	Miscellaneous causes	Total, shaft and slope	
Fatal and nonfatal:																																
Copper-----	64	-	66	37	103	122	18	20	3	55	-	4	1	85	3	-	15	-	596	3	-	8	12	13	2	-	-	11	-	7	56	632
Gold-silver-----	59	3	6	12	32	81	16	6	-	31	-	2	-	64	3	-	4	-	319	1	2	2	2	-	-	-	-	-	-	5	324	
Iron-----	21	-	44	23	74	51	11	14	2	18	-	5	2	46	1	-	7	-	319	-	-	2	1	-	-	-	-	-	-	2	321	
Lead-zinc-----	130	-	27	35	141	226	43	33	2	127	-	9	2	182	5	1	18	3	984	-	-	3	1	-	4	2	-	3	-	13	997	
Uranium-----	21	-	11	11	20	24	3	3	3	22	-	1	-	32	1	-	3	-	151	1	1	1	1	-	-	-	1	3	-	11	162	
Miscellaneous metals-----	31	-	10	3	39	56	7	5	3	27	2	5	1	52	1	-	6	-	248	-	-	-	1	-	-	-	1	-	2	2	250	
Total-----	326	3	164	121	409	560	98	81	10	280	2	26	6	461	13	1	53	3	2,617	5	2	14	18	14	6	2	1	15	3	9	89	2,706
Fatal:																																
Copper-----	2	-	-	-	-	-	-	-	-	4	-	1	1	1	-	-	-	-	9	-	1	-	-	-	-	-	-	-	-	2	11	
Gold-silver-----	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	1	5	
Iron-----	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	4	5	
Lead-zinc-----	6	-	-	-	1	-	-	-	-	3	-	1	-	1	-	-	-	-	12	-	-	-	1	-	16	-	-	3	-	4	16	
Uranium-----	2	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	5	-	-	-	-	-	5	-	-	-	-	5	5	
Miscellaneous metals-----	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	1	-	-	1	4	
Total-----	13	-	-	-	2	1	-	-	-	12	-	2	2	3	-	-	-	-	35	-	1	-	3	-	-	-	-	1	3	-	8	43
Permanent total:																																
Copper-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-silver-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead-zinc-----	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Permanent partial:																																
Copper-----	-	-	-	-	-	2	-	-	-	1	-	1	-	1	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	5
Gold-silver-----	-	-	1	-	1	3	-	-	-	3	-	1	-	3	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	11
Iron-----	-	-	-	1	2	-	-	-	-	1	-	1	-	2	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	6
Lead-zinc-----	2	-	1	1	2	5	-	-	-	5	-	1	-	2	-	-	-	2	21	-	1	-	-	-	-	-	-	-	-	1	22	22
Uranium-----	1	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Miscellaneous metals-----	2	-	-	-	-	3	-	-	-	2	-	-	-	6	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	14
Total-----	5	-	2	2	4	16	-	-	-	12	-	3	-	14	-	-	-	2	60	-	1	-	-	-	-	-	-	-	-	1	61	61
Temporary total:																																
Copper-----	62	-	66	37	103	120	18	20	3	50	-	2	-	83	3	-	15	-	582	3	-	8	10	13	2	-	-	11	-	7	54	636
Gold-silver-----	58	3	5	12	30	77	16	6	-	27	-	2	-	61	3	-	4	-	304	1	1	-	-	-	-	-	-	-	-	4	308	
Iron-----	21	-	44	22	74	51	11	14	2	16	-	4	1	44	1	-	7	-	311	-	-	2	-	-	-	-	-	-	-	2	313	
Lead-zinc-----	122	-	26	34	137	221	43	33	2	119	-	7	2	179	5	1	18	1	950	-	-	2	-	-	4	2	-	-	-	8	958	
Uranium-----	18	-	11	11	20	22	3	3	3	20	-	1	-	31	-	-	3	-	143	1	-	1	2	1	-	-	1	3	-	11	154	
Miscellaneous metals-----	27	-	10	3	38	53	7	5	3	24	2	5	1	46	1	-	6	-	231	-	-	-	-	-	-	-	-	-	-	-	1	232
Total-----	308	3	162	119	402	543	98	81	10	256	2	21	4	444	13	1	53	1	2,521	5	1	13	15	14	6	2	1	14	-	9	80	2,601

TABLE A-10. - Injuries by general work location and main cause at metal mines and mills in the United States, by degree of injury and mineral industry, 1970 - Continued

Degree of injury and mineral industry	Underground mines - continued												Open pit mines													
	Surface												Total, underground mines													
	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Electricity	Machinery	Miscellaneous causes	Total, surface	Falls of face or side or objects	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Fires or suffocation from fumes	Miscellaneous causes	Total, open pit	
Fatal and nonfatal:																										
Copper-----	1	5	17	3	2	1	3	1	6	2	41	693	-	16	73	72	10	11	2	84	1	3	49	-	12	333
Gold-silver-----	-	4	4	2	1	1	1	-	1	-	14	338	3	4	40	2	2	-	-	31	-	-	2	-	7	348
Iron-----	5	14	4	4	2	-	8	-	6	6	49	370	4	4	39	37	10	5	-	-	-	1	31	1	7	171
Lead-zinc-----	6	17	32	6	3	-	11	1	5	4	85	1,082	1	-	3	1	3	-	-	9	-	-	6	-	2	47
Uranium-----	3	3	5	1	2	-	2	-	3	1	12	174	1	1	9	11	3	1	-	9	-	2	6	-	2	67
Miscellaneous metals-----	2	5	9	1	2	1	2	-	3	1	26	276	1	-	13	19	3	1	-	9	1	1	10	-	-	58
Total-----	14	48	71	16	10	3	26	2	24	13	227	2,933	10	21	139	142	26	20	2	134	2	7	98	1	21	623
Fatal:																										
Copper-----	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	1	1	-	-	2
Gold-silver-----	-	-	-	-	-	-	-	-	-	-	-	5	3	-	1	2	-	-	-	1	-	-	2	-	-	3
Iron-----	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	1	-	-	-	-	-	6
Lead-zinc-----	-	-	-	-	-	-	-	-	1	-	1	6	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Uranium-----	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	-	-	-	-	-	-	-	-	1	-	1	44	3	-	1	2	-	-	-	1	-	3	3	-	-	13
Permanent total:																										
Copper-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-silver-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead-zinc-----	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Permanent partial:																										
Copper-----	-	1	-	-	-	-	-	1	-	-	2	7	-	1	2	2	-	-	-	3	-	-	4	-	-	12
Gold-silver-----	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Iron-----	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	1	1	-	-	2	-	3	-	-	-	7
Lead-zinc-----	-	-	-	-	-	-	-	-	1	-	1	23	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Uranium-----	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-	1	-	-	-	-	-	2
Miscellaneous metals-----	-	-	2	-	-	-	-	-	-	-	2	16	-	-	-	-	1	-	-	-	-	-	1	-	-	2
Total-----	-	1	2	-	-	-	-	1	1	-	5	66	-	1	2	4	2	-	-	6	-	-	9	-	-	24
Temporary total:																										
Copper-----	1	4	17	3	2	1	3	-	6	2	39	675	-	15	71	70	10	11	2	81	1	2	44	-	12	319
Gold-silver-----	5	14	4	2	1	1	1	-	1	-	14	322	4	4	39	34	9	5	-	28	-	-	1	1	7	138
Iron-----	6	17	32	6	3	-	11	1	4	4	84	1,042	1	-	3	1	-	-	-	1	-	1	-	-	6	43
Lead-zinc-----	3	3	5	-	2	-	1	-	2	-	11	165	1	1	9	10	3	3	-	8	-	-	-	-	2	43
Uranium-----	2	5	7	1	2	1	2	-	3	1	24	256	1	-	13	19	2	1	-	9	1	1	9	-	-	56
Miscellaneous metals-----	14	47	69	16	10	3	26	1	22	13	221	2,822	7	20	136	136	24	20	2	127	2	4	86	1	21	586
Total-----	14	47	69	16	10	3	26	1	22	13	221	2,822	7	20	136	136	24	20	2	127	2	4	86	1	21	586

TABLE A-10. - Injuries by general work location and main cause at metal mines and mills in the United States, by degree of injury and mineral industry, 1970 - Continued

Degree of injury and mineral industry	Other surface mining						Total, mining activities or objects	Mills												Grand total			
	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage		Machinery	Total, other surface mining	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Electricity	Machinery	Suffocation (no flame or smoldering)		Fires or suffocation from fires	Miscellaneous causes	Total, mills
Fatal and nonfatal:																							
Copper-----	-	-	-	-	-	1	-	1,027	9	72	60	16	5	4	7	1	34	2	1	22	233	1,260	
Gold-silver-----	3	4	1	1	-	12	3	358	5	2	4	-	1	1	1	-	1	-	-	-	11	369	
Iron-----	-	-	-	-	-	2	-	543	2	49	44	2	6	7	13	2	31	-	-	8	166	709	
Lead-zinc-----	-	-	-	-	-	-	-	1,088	2	20	30	4	3	3	3	2	11	-	-	-	75	1,163	
Uranium-----	2	4	-	-	1	7	-	228	3	17	28	2	-	-	3	1	24	13	-	9	72	300	
Miscellaneous metals-----	-	-	-	-	-	-	-	334	5	30	44	3	4	2	10	-	24	13	1	37	173	507	
Total-----	5	8	1	1	1	22	5	3,578	24	190	210	27	19	14	37	5	110	15	2	77	730	4,308	
Fatal:																							
Copper-----	-	-	-	-	-	-	-	13	-	-	1	-	-	-	-	-	1	-	-	-	-	2	15
Gold-silver-----	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8
Iron-----	-	-	-	-	-	-	-	16	-	-	-	-	-	-	2	-	1	-	-	-	-	4	12
Lead-zinc-----	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16
Uranium-----	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	2	-	-	-	-	8	8
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6
Total-----	-	-	-	-	-	-	-	57	1	-	1	-	-	-	2	-	4	-	-	-	-	8	65
Permanent total:																							
Copper-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-silver-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead-zinc-----	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Uranium-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Permanent partial:																							
Copper-----	-	-	-	-	-	-	2	19	-	-	2	1	-	-	-	-	5	-	-	-	-	8	27
Gold-silver-----	-	1	-	-	-	3	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	6	15
Iron-----	-	-	-	-	-	-	-	13	-	1	-	-	-	-	-	-	4	-	-	-	-	5	19
Lead-zinc-----	-	-	-	-	-	-	-	23	-	1	2	-	-	-	1	-	1	-	-	-	-	3	28
Uranium-----	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8
Miscellaneous metals-----	-	-	-	-	-	-	-	18	-	1	1	1	-	-	-	-	3	-	-	-	-	8	26
Total-----	-	1	-	-	-	3	2	93	-	3	6	2	-	-	1	-	18	-	-	-	-	30	123
Temporary total:																							
Copper-----	-	-	-	-	-	1	-	995	9	72	57	15	5	4	7	1	28	2	1	22	223	1,218	
Gold-silver-----	3	3	1	1	-	9	1	335	4	2	4	-	1	1	1	-	1	-	-	-	1	11	346
Iron-----	-	-	-	-	-	2	-	522	2	48	43	2	6	7	11	1	26	-	-	8	156	678	
Lead-zinc-----	-	-	-	-	-	-	-	1,048	2	19	28	4	3	-	2	2	10	-	-	-	-	70	1,118
Uranium-----	2	4	-	-	1	7	-	215	3	17	28	2	2	-	3	1	6	-	-	-	9	69	284
Miscellaneous metals-----	-	-	-	-	-	-	-	312	5	29	43	2	4	2	10	-	17	13	1	37	163	475	
Total-----	5	7	1	1	1	19	3	3,427	23	187	203	25	19	14	34	5	88	15	2	77	692	4,119	

TABLE A-11. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by mineral industry, 1970

Mineral industry	Fatal				Nonfatal											
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface	Total					Underground	Surface	Total						
Injuries																
Copper-----	11	-	11	2	13	2	15	641	41	682	331	1	1,014	231	1,245	
Gold-silver-----	5	-	5	3	8	-	8	319	14	333	5	12	350	11	361	
Iron-----	2	-	2	6	8	-	12	319	49	368	165	2	535	162	697	
Lead-zinc-----	16	-	16	-	16	-	16	981	85	1,066	65	7	1,072	72	1,147	
Uranium-----	5	1	6	2	8	-	6	157	11	168	45	-	202	58	260	
Miscellaneous metals-----	4	-	4	-	4	2	6	246	26	272	58	-	330	171	501	
Total-----	43	1	44	13	57	8	65	2,663	226	2,889	610	22	3,521	722	4,243	
Frequency rates per million man-hours																
Copper-----	0.82	-	0.64	0.07	0.29	0.11	0.24	47.69	11.22	39.89	11.98	23.85	22.66	12.77	19.81	
Gold-silver-----	1.13	-	.80	7.94	1.15	-	1.05	71.79	7.65	53.09	13.24	43.07	50.51	16.04	47.41	
Iron-----	.33	-	.23	.36	.31	.23	.28	52.17	19.48	42.64	9.99	20.28	21.05	9.18	16.19	
Lead-zinc-----	1.28	-	1.03	-	1.01	-	.86	78.31	27.62	68.32	38.31	-	67.95	26.72	61.73	
Uranium-----	1.11	1.08	1.23	.89	1.11	-	.69	39.66	11.84	34.38	19.96	98.92	30.50	16.42	25.18	
Miscellaneous metals-----	.91	-	.79	-	.52	.15	.28	56.04	38.94	53.78	27.07	-	42.84	12.49	23.42	
Combined rate-----	.96	.08	.76	.26	.53	.14	.39	59.34	17.83	50.20	12.39	21.81	32.66	12.60	25.70	
Severity rates per million man-hours																
Copper-----	4,910	-	3,961	434	1,743	663	1,432	1,646	1,323	1,577	608	859	978	1,041	996	
Gold-silver-----	6,752	-	4,783	47,659	6,927	1,360	6,303	3,152	1,69	2,282	344	2,746	2,195	1,181	2,014	
Iron-----	7,924	-	1,391	2,157	1,889	1,360	1,672	1,568	450	1,242	811	61	2,955	301	687	
Lead-zinc-----	7,684	-	7,136	-	6,085	-	5,166	3,494	787	2,960	1,086	-	2,939	966	2,641	
Uranium-----	5,467	6,460	7,366	5,321	6,655	-	4,139	1,691	146	1,398	639	99	1,148	676	970	
Miscellaneous metals-----	-	-	4,746	-	3,115	877	1,683	2,188	1,598	2,110	1,781	-	1,881	832	1,210	
Combined rate-----	5,749	473	4,588	1,584	-	838	2,362	2,358	781	2,010	729	807	1,414	721	1,173	
Average men working daily																
Active operations										Average days active						
Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	
98	86	19	203	49	5,394	1,599	6,993	9,967	59	17,019	6,435	345	87	328	351	
267	71	179	517	30	2,136	800	2,936	252	303	3,491	288	180	111	247	298	
13	67	5	85	47	2,910	1,120	4,030	6,655	67	10,752	6,588	313	156	295	334	
183	11	19	213	55	5,871	1,437	7,308	78	26	7,412	8,645	251	73	266	284	
396	32	216	644	20	2,203	516	2,719	1,073	260	4,052	1,715	234	33	215	307	
95	107	22	224	65	1,888	308	2,196	985	201	3,382	5,276	287	271	284	324	
Total or average-----	1,052	374	1,886	266	20,402	5,780	19,010	916	46,108	21,535	67,643	321	134	291	331	

TABLE A-11. - Injuries, experience and worktime data by general work location at metal mines and mills in the United States, by mineral industry, 1970 - Continued

Mineral industry	Man-days worked						Man-hours worked									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground	Surface	Total						Underground	Surface	Total					
-----Copper-----	1,680,245	456,735	2,136,980	3,439,816	5,125	5,581,921	2,260,206	7,842,127	13,441,507	3,653,896	17,095,403	27,619,068	41,923	44,756,394	18,091,608	62,848,002
-----Gold-silver-----	556,037	228,556	784,593	45,274	33,694	863,561	85,717	949,278	4,443,228	1,825,463	6,272,691	377,684	278,587	6,928,962	685,889	7,614,851
-----Iron-----	764,100	314,259	1,078,359	2,081,607	10,451	3,170,417	2,202,958	5,373,375	6,114,720	2,514,791	8,629,511	16,688,150	98,626	25,416,287	17,640,924	43,057,211
-----Lead-zinc-----	1,563,973	384,404	1,948,377	19,575	1,889	1,969,841	350,394	2,320,235	12,526,357	3,077,693	15,604,050	136,602	14,912	15,775,564	2,806,440	18,582,004
-----Uranium-----	494,405	115,772	610,177	230,764	8,649	869,590	527,233	1,396,823	3,958,455	928,787	4,887,242	2,255,023	70,767	7,213,032	4,383,631	11,596,663
-----Miscellaneous metals-----	547,728	83,235	630,963	256,793	62,958	960,714	1,709,975	2,670,689	4,389,747	667,652	5,057,399	2,142,377	503,784	7,703,560	13,688,648	21,392,208
Total-----	5,606,488	1,582,961	7,189,449	6,103,829	122,766	13,416,044	7,136,483	20,552,527	44,874,014	12,672,282	57,546,296	49,238,904	1,008,599	107,793,799	57,297,140	165,090,939

TABLE A-12. - Injuries, experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by mineral industry, 1970

Mineral industry	Fatal					Nonfatal											
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface							Underground	Surface							Total
Injuries																	
Antimony-----	-	-	-	-	-	-	-	-	1	1	-	-	-	8	-	-	-
Bauxite-----	-	-	-	-	-	-	-	-	-	4	-	-	-	2	-	12	100
Beryllium-----	-	-	-	-	-	-	-	-	-	2	-	-	-	4	-	2	4
Manganese-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Mercury-----	-	-	-	-	-	-	-	-	-	91	5	96	17	17	-	113	34
Molybdenum-----	4	-	-	-	-	-	-	-	1	101	13	114	23	23	-	137	18
Nickel-----	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	4
Titanium-----	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	1
Tungsten-----	-	-	-	-	-	-	-	-	-	48	8	56	5	5	-	56	7
Other metals y -----	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5	6
Total-----	4	-	-	-	-	-	-	-	2	246	26	272	58	58	-	330	171
Frequency rates per million man-hours																	
Antimony-----	-	-	-	-	-	-	-	-	0.09	-	-	-	-	17.83	-	20.33	9.33
Bauxite-----	-	-	-	-	-	-	-	-	-	34.62	-	-	-	34.57	-	34.57	18.17
Beryllium-----	-	-	-	-	-	-	-	-	-	130.62	-	-	-	101.43	-	101.43	12.32
Manganese-----	-	-	-	-	-	-	-	-	-	-	-	-	-	125.00	-	121.94	96.55
Mercury-----	-	-	-	-	-	-	-	-	-	156.80	51.38	141.66	68.90	68.90	-	121.94	114.28
Molybdenum-----	-	-	-	-	-	-	-	-	.76	33.69	36.32	33.97	26.89	26.89	-	32.53	13.72
Nickel-----	1.33	-	-	-	-	-	-	-	-	-	-	-	-	2.87	-	1.20	3.78
Titanium-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68.30	8.20
Tungsten-----	-	-	-	-	-	-	-	-	-	76.01	47.87	70.12	32.61	32.61	-	68.30	15.92
Other metals y -----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30.68	32.68
Combined rate-----	.91	-	-	-	-	-	-	-	.15	56.04	38.94	53.78	27.07	27.07	-	42.84	12.49
																	23.42

y Not elsewhere classified.

TABLE A-12. - Injury experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by mineral industry, 1970 - Continued

Mineral industry	Fatal						Nonfatal									
	Underground mines			Open pit mines	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface	Total mining	Mills	Grand total	
	Underground	Surface	Total					Underground	Surface	Total						
				Severity rates per million man-hours												
Antimony-----	-	-	-	-	-	-	531	-	-	-	-	1,343	1,467	-	-	-
Bauxite-----	-	-	-	-	-	560	-	1,679	-	-	-	-	-	-	1,437	525
Beryllium-----	-	-	-	-	-	131	-	-	-	-	-	-	-	-	35	154
Manganese-----	-	-	-	-	-	-	-	-	-	-	-	-	375	-	305	265
Mercury-----	-	-	-	-	-	-	-	4,987	-	1,017	-	4,417	5,929	-	5,350	5,767
Molybdenum-----	8,006	-	-	-	-	4,572	5,431	1,787	1,520	1,758	534	-	1,514	-	2,244	1,687
Titanium-----	-	-	-	-	-	-	-	-	-	-	-	-	351	-	236	179
Tungsten-----	-	-	-	-	-	-	-	1,832	2,537	1,980	-	-	-	-	1,085	1,634
Other metals ^{1/} -----	-	-	-	-	-	-	-	-	-	-	320	-	301	-	1,498	935
Combined rate-----	5,467	-	4,746	-	-	877	1,683	2,188	1,598	2,110	1,781	-	1,881	-	832	1,210
Average men working daily																
Active operations						Average days active										
Under-ground mines	Open pit mines	Other surface mining	Underground mines		Mills	Open pit mines	Other surface mining	Total mining activities	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Mills
			Underground	Surface												
15	4	1	20	6	43	6	4	53	24	77	144	50	189	137	107	
1	11	-	12	57	71	222	-	293	4,061	4,354	254	251	-	252	330	
7	6	4	17	5	20	22	4	46	65	111	111	200	10	157	312	
1	1	1	3	1	7	16	1	24	5	29	130	250	10	205	150	
47	47	3	97	328	51	379	5	542	190	732	220	562	56	210	232	
4	2	1	7	134	1,288	295	1	1,584	455	2,039	326	362	10	332	360	
1	3	3	7	2	2	137	169	328	214	542	68	277	359	318	285	
19	31	4	54	77	386	36	4	426	179	605	259	74	10	261	307	
Other metals ^{1/} -----	2	5	7	-	-	73	13	86	83	169	-	263	91	237	277	
Total or average-----	95	107	22	224	65	985	201	3,382	5,276	8,658	287	271	313	284	324	
Man-hours worked																
Man-days worked						Man-hours worked										
Underground mines	Open pit mines	Other surface mining	Underground mines		Mills	Grand total	Underground	Surface	Total	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Mills	Grand total
Underground	Surface	Total														
5,146	1,035	6,181	300	755	2,568	9,804	41,811	8,276	50,087	2,400	6,041	58,528	22,948	81,476		
14,445	3,611	18,056	55,679	-	73,735	1,413,058	115,555	28,889	146,444	448,601	-	593,045	10,714,591	11,307,636		
1,911	2,794	4,394	4,394	40	7,228	27,521	15,312	7,064	22,376	35,158	320	57,854	162,346	220,200	536	
780	130	910	4,000	10	4,920	5,670	1,040	1,040	7,280	32,000	80	39,360	6,000	45,360		
71,585	11,931	83,516	30,203	282	114,001	158,099	580,344	97,318	677,662	246,737	2,256	926,655	359,606	1,286,261		
374,737	44,741	419,478	106,908	10	526,396	690,422	2,997,893	337,933	3,575,826	855,268	80	4,211,174	1,312,220	5,523,394		
137	-	137	1,096	60,634	104,262	165,208	1,096	1,096	1,096	347,931	485,068	834,095	1,312,220	1,321,672		
Tungsten-----	-	-	43,491	60,634	104,262	157,599	631,496	167,132	798,628	20,934	9,619	819,882	439,745	1,259,627		
Other metals ^{1/} -----	-	-	19,169	1,187	20,356	43,308	-	-	-	153,348	9,619	162,967	183,615	346,582		
Total-----	547,728	83,235	630,963	266,793	960,714	2,670,689	4,389,747	667,652	5,057,399	2,142,377	503,784	7,703,560	13,688,648	21,392,208		

^{1/} Not elsewhere classified.

TABLE A-13. - Injury experience and worktime data by general work location at copper mines and mills in the United States, by State, 1970 - Continued

State	Fatal					Nonfatal														
	Underground mines			Open pit mines	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total						
	Underground	Surface	Total				Underground	Surface	Total											
				Severity rates per million man-hours																
Alaska-----	4,223	-	3,489	863	-	1,865	-	614	1,487	-	1,573	2,202	-	1,682	-	744	-	1,102	636	961
Arizona-----	-	-	-	-	-	-	-	-	-	-	7,470	-	-	7,470	-	-	-	3,397	712	3,397
California-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	3,312	-	3,049	-	-	3,049	-	-	2,804	-	825	3,246	-	1,018	-	-	1,018	1,148	3,305	936
Montana-----	8,763	-	4,394	-	-	1,927	-	-	1,523	-	3,577	108	-	1,847	-	592	5,875	109	1,340	602
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	-	1,515	4,157	2,290
New Mexico-----	10,687	-	7,886	-	-	2,069	-	-	1,462	-	4,316	1,906	-	3,684	-	745	-	2,582	798	2,136
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,582	-	-	-	-
Oregon-----	5,000,000	-	5,000,000	-	-	5,000,000	-	-	5,000,000	-	721	-	-	523	-	-	523	394	51	423
Tennessee-----	-	-	-	-	-	-	-	-	646	-	1,027	-	-	781	-	391	269	3,613	-	3,020
Utah-----	-	-	-	-	-	-	-	1,772	646	-	5,113	-	-	3,613	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	4,910	-	3,861	434	-	1,743	-	663	1,432	-	1,646	1,323	-	1,577	-	608	859	978	1,041	996
Average men working daily																Average days active				
Active operations		Underground mines					Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total			
Mines	Mills	Underground	Surface	Total																
Alaska-----	1	26	2,812	596	-	3,408	1	22	8,444	1	3,504	-	4	-	4	-	11,948	-	333	348
Arizona-----	88	-	3	-	-	-	5,014	1	8	-	-	315	345	114	333	89	10	74	312	-
California-----	5	-	3	-	-	26	4	4	30	-	15	-	78	80	179	184	45	80	179	312
Colorado-----	11	1	23	3	-	5	5	1	11	-	-	-	198	21	169	169	11	21	169	-
Idaho-----	8	-	5	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	4	1	1,269	115	-	1,384	-	-	1,384	-	120	1,504	345	23	356	356	1,504	356	356	358
Montana-----	13	3	648	658	-	1,306	-	22	2,594	-	578	3,172	343	277	300	261	3,172	300	358	358
Nevada-----	15	3	6	1	-	7	762	4	4	-	490	1,263	343	341	341	146	1,263	341	365	-
New Mexico-----	34	9	256	90	-	346	824	5	1,175	-	447	1,622	322	128	308	275	1,622	308	335	-
Oklahoma-----	1	1	-	-	-	-	42	-	42	-	14	-	302	-	302	-	56	-	302	302
Oregon-----	1	-	2	-	-	2	-	-	-	-	-	-	-	-	-	75	-	-	-	-
Tennessee-----	6	1	338	127	-	465	-	-	465	-	82	547	-	-	253	-	547	-	340	-
Utah-----	12	3	15	4	-	19	2,049	-	2,068	-	1,182	3,250	357	-	356	253	3,250	356	358	358
Washington-----	3	1	14	5	-	19	-	-	19	-	3	22	-	-	193	-	22	-	193	240
Wyoming-----	1	-	3	-	-	3	-	-	3	-	-	3	-	-	15	-	3	-	15	-
Total or average-----	203	49	5,394	1,599	-	6,993	9,967	59	17,019	-	6,435	-	345	87	328	306	23,454	-	328	351

TABLE A-13. - Injury experience and worktime data by general work location at copper mines and mills in the United States, by State, 1970 - Continued

State	Man-days worked							Man-hours worked								
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground	Surface							Underground	Surface						
		Total								Total						
Alaska-----	888,009	186,776	1,074,785	1,730,541	2,510	2,807,836	1,220,904	4,028,740	7,103,633	1,494,224	8,597,857	13,900,597	20,082	22,518,536	9,767,221	32,285,757
Arizona-----	268	780	5,039	311	10	589	4,680	589	2,142	6,240	40,312	2,488	80	4,710	-	85,006
California-----	4,259	845	492,039	988	21	1,854	42,977	10,041	34,072	6,240	6,757	7,905	210	14,872	42,120	14,872
Colorado-----	452,947	39,092	341,385	436,150	514	778,049	206,913	535,016	3,623,574	312,736	3,936,310	3,489,200	6,128	6,226,408	343,812	4,280,122
Idaho-----	171,165	170,220	1,024	261,503	1,107	263,634	178,773	442,407	1,969,320	1,361,760	2,731,080	2,126,049	8,859	2,143,100	1,655,304	7,881,712
Montana-----	706	318	265,643	641	641	361,387	149,843	511,230	561,442	199,383	760,825	2,135,393	3,990	2,900,208	1,430,803	3,573,903
New Mexico-----	70,181	24,922	95,103	12,686	-	12,686	4,229	16,915	1,200	-	1,200	101,489	-	101,489	33,829	135,318
Oklahoma-----	150	32,403	117,831	731,990	-	117,831	27,854	145,685	683,417	259,216	942,633	5,855,917	-	942,633	222,832	1,165,465
Oregon-----	85,428	1,448	4,799	3,667	-	736,789	423,313	1,160,102	29,211	9,184	38,395	-	-	5,894,312	3,386,502	9,280,814
Tennessee-----	3,651	1,076	3,667	45	-	3,667	720	4,387	20,731	8,609	29,340	-	-	29,340	5,760	35,100
Utah-----	2,591	-	45	-	-	45	-	-	360	-	360	-	-	360	-	360
Washington-----	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	1,680,245	456,735	2,136,980	3,439,816	5,125	5,581,921	2,260,206	7,842,127	13,441,507	3,653,896	17,095,403	27,619,068	41,923	44,756,394	18,091,608	62,848,002

TABLE A-14. - Injury experience and worktime data by general work location at gold-silver mines and mills in the United States, by State, 1970

State	Fatal						Nonfatal									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground	Surface	Total						Underground	Surface	Total					
Injuries																
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	12
Arizona-----	-	-	-	-	-	-	-	-	6	-	6	1	-	7	-	7
California-----	-	-	-	-	-	-	-	-	3	-	3	-	-	3	1	4
Colorado-----	-	-	-	-	-	-	-	-	14	-	14	-	-	14	2	16
Idaho-----	1	-	1	-	-	1	-	1	195	5	200	-	-	200	4	204
Montana-----	-	-	-	-	-	-	-	-	4	-	4	-	-	4	-	4
Nevada-----	-	-	-	-	-	-	-	-	5	-	5	4	-	9	4	13
New Mexico-----	1	-	1	3	-	4	-	4	1	-	1	1	-	1	-	1
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota-----	3	-	3	-	-	3	-	3	78	8	86	-	-	86	-	86
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	13	1	14	-	-	14	-	14
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	5	-	5	3	-	8	-	8	319	14	333	5	12	350	11	361

TABLE A-14. - Injury experience and worktime data by general work location at gold-silver mines and mills in the United States, by State, 1970 - Continued

[illegible]

TABLE A-15. - Injury experience and worktime data by general work location at iron mines and mills in the United States, by State, 1970 - Continued

State	Fatal						Nonfatal										
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface							Underground	Surface							Total
Frequency rates per million man-hours																	
Alabama-----	-	-	-	-	-	-	-	-	17.00	11.89	16.22	34.07	-	20.49	7.31	18.52	
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	165.34	-	163.19	-	70.78	
Arkansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
California-----	-	-	-	0.74	-	0.72	0.62	0.67	50.47	-	40.37	28.68	-	28.89	5.56	16.31	
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	41.87	-	41.73	-	41.73	
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	24.19	-	17.09	-	17.09	
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Michigan-----	0.63	-	0.49	-	-	0.30	0.14	0.14	61.55	21.13	52.21	32.21	49.19	44.60	25.22	34.57	
Minnesota-----	-	-	-	-	-	0.41	0.30	0.36	109.24	45.12	89.68	4.33	-	4.28	3.44	3.90	
Missouri-----	.60	-	.42	0.42	-	.42	.35	.35	109.24	45.12	89.68	152.63	-	89.68	29.33	79.66	
Montana-----	-	-	-	-	-	-	-	-	-	-	-	66.50	-	66.50	37.54	58.32	
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
New Mexico-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
New York-----	-	-	-	-	-	-	-	-	13.24	-	11.09	6.28	-	10.00	1.31	5.47	
North Carolina-----	-	-	-	-	-	-	-	-	55.41	-	46.05	-	-	46.05	-	46.05	
Pennsylvania-----	-	-	-	-	-	-	-	-	3.54	3.55	3.54	-	-	3.54	5.83	3.81	
Texas-----	-	-	-	-	-	-	-	-	-	-	-	15.69	-	15.69	9.33	11.70	
Utah-----	-	-	-	-	-	-	-	-	-	-	-	20.02	-	20.02	11.24	18.24	
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	-	9.51	-	9.51	16.92	14.97	
Wyoming-----	-	-	-	-	-	-	-	-	82.93	13.67	55.04	1.22	-	17.80	-	15.75	
Combined rate-----	.33	-	.23	.36	-	.31	.23	.28	52.17	19.48	42.64	9.89	20.28	21.05	9.18	16.19	
Severity rates per million man-hours																	
Alabama-----	-	-	-	-	-	-	-	-	2,237	250	1,936	745	-	1,571	315	1,384	
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	1,984	-	1,958	-	849	
Arkansas-----	-	-	-	-	-	-	-	-	303	-	242	2,932	-	2,883	267	1,473	
California-----	-	-	-	4,412	-	4,333	3,706	3,995	-	-	-	1,759	-	1,753	-	1,753	
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	206	-	145	-	145	
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Michigan-----	3,807	-	2,928	-	-	1,784	-	861	2,015	469	1,658	1,324	148	1,514	489	983	
Minnesota-----	-	-	-	-	-	2,467	1,822	2,178	-	-	-	338	-	334	155	254	
Missouri-----	3,601	-	2,503	2,495	-	2,503	-	2,087	2,338	663	1,827	458	-	1,827	419	1,593	
Montana-----	-	-	-	-	-	-	-	-	-	-	-	458	-	458	-	458	
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	1,729	-	1,729	7,696	3,415	
New Mexico-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
New York-----	-	-	-	-	-	-	-	-	1,331	-	1,115	82	-	880	13	428	
North Carolina-----	-	-	-	-	-	-	-	-	1,995	-	1,658	-	-	1,658	-	1,658	
Pennsylvania-----	-	-	-	-	-	-	-	-	314	380	336	-	-	335	277	328	
Texas-----	-	-	-	-	-	-	-	-	-	-	-	23,619	-	23,619	966	9,413	
Utah-----	-	-	-	-	-	-	-	-	-	-	-	601	-	601	630	607	
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	-	951	-	951	1,875	1,632	
Wyoming-----	-	-	-	-	-	-	-	-	1,331	567	1,024	9	-	321	-	284	
Combined rate-----	1,962	-	1,391	2,157	-	1,889	1,360	1,672	1,568	450	1,242	811	61	955	301	687	

TABLE A-15. - Injury experience and worktime data by general work location at iron mines and mills in the United States, by State, 1970 - Continued

State	Active operations		Average men working daily										Average days active				
	Mines	Mills	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
			Underground	Surface	Total												
Alabama-----	4	2	241	43	284	84	20	388	50	438	244	269	94	242	301		
Arizona-----	4	1	1	-	1	5	-	6	4	10	10	151	-	128	250		
Arkansas-----	1	-	-	-	-	-	5	5	-	5	-	-	70	-	-		
California-----	3	1	9	2	11	471	-	482	615	1,097	288	361	-	359	329		
Colorado-----	3	-	-	-	-	12	1	13	-	13	-	249	10	230	-		
Georgia-----	3	-	-	-	-	30	20	50	-	50	-	319	156	254	-		
Idaho-----	1	-	-	-	-	5	-	5	-	5	-	103	-	103	-		
Michigan-----	8	8	877	240	1,117	720	21	1,858	1,278	3,136	229	221	242	226	353		
Minnesota-----	31	21	67	67	134	4,610	-	4,677	3,660	8,337	257	326	-	325	337		
Missouri-----	2	2	696	309	1,005	-	-	1,005	176	1,181	298	-	-	298	338		
Montana-----	1	-	-	-	-	3	-	3	-	3	-	273	-	273	-		
Nevada-----	4	2	-	-	-	62	-	62	26	88	-	264	-	264	256		
New Mexico-----	1	-	-	-	-	3	-	3	-	3	-	197	-	197	-		
New York-----	2	2	244	47	291	73	-	364	355	719	232	272	-	240	268		
North Carolina-----	1	-	8	2	10	-	-	10	122	1,189	300	76	-	298	352		
Pennsylvania-----	3	2	720	338	1,058	9	-	1,067	96	151	-	289	-	289	279		
Texas-----	4	2	-	-	-	55	-	55	96	151	-	256	-	256	222		
Utah-----	4	2	-	-	-	171	-	171	50	221	-	263	-	263	365		
Wisconsin-----	1	1	-	-	-	50	-	50	101	151	-	263	-	263	365		
Wyoming-----	4	1	114	72	186	292	-	478	55	533	244	349	-	309	349		
Total or average-----	85	47	2,910	1,120	4,030	6,655	67	10,752	6,588	17,340	268	313	156	295	334		

State	Underground mines			Open pit mines			Total mining activities	Mills	Grand total	Underground mines			Open pit mines			Total mining activities	Mills	Grand total			
	Underground	Surface	Total	Underground	Surface	Total				Underground	Surface	Total	Underground	Surface	Total						
Alabama-----	58,836	10,513	69,349	22,614	1,882	24,496	93,845	15,065	108,910	470,684	84,105	554,789	205,469	20,702	226,171	136,720	917,680				
Arizona-----	10	-	10	756	-	766	1,766	1,000	2,766	80	-	80	6,048	-	6,048	8,000	14,128				
Arkansas-----	-	-	-	-	350	350	350	350	350	-	-	-	-	2,800	-	2,800	2,800				
California-----	2,534	634	3,168	169,982	-	173,150	2,995	202,395	375,545	19,814	4,954	24,768	1,360,012	-	1,360,012	1,619,161	3,003,941				
Colorado-----	-	-	-	2,985	10	2,995	2,995	2,995	2,995	-	-	-	23,883	80	23,963	23,963	23,963				
Georgia-----	-	-	-	9,584	3,126	12,710	12,710	12,710	12,710	-	-	-	82,674	34,383	117,057	117,057	117,057				
Idaho-----	-	-	-	515	-	515	515	-	515	-	-	-	4,121	-	4,121	-	4,121				
Michigan-----	197,000	59,168	256,168	159,124	5,083	164,207	420,375	430,970	871,345	1,576,002	473,344	2,049,346	1,272,993	40,661	3,363,000	3,607,777	6,970,777				
Minnesota-----	17,204	17,204	34,408	1,502,869	-	1,520,073	1,520,073	1,235,198	2,755,271	137,635	137,635	137,635	12,022,972	-	12,160,607	9,881,586	22,042,193				
Missouri-----	207,955	91,316	299,271	-	-	-	299,271	59,539	358,810	1,666,012	731,397	2,397,409	-	-	2,397,409	477,382	2,874,791				
Montana-----	-	-	-	819	-	819	819	-	819	-	-	-	6,552	-	6,552	-	6,552				
Nevada-----	-	-	-	16,377	-	16,377	16,377	6,659	23,036	-	-	-	135,331	-	135,331	53,273	188,604				
New Mexico-----	-	-	-	590	-	590	590	-	590	-	-	-	4,721	-	4,721	-	4,721				
New York-----	56,651	10,962	67,613	19,891	-	19,891	87,504	95,194	182,698	433,211	87,694	540,905	159,128	-	700,033	761,520	1,461,553				
North Carolina-----	2,256	458	2,714	-	-	-	2,714	2,714	2,714	18,048	3,667	21,715	-	-	21,715	-	21,715				
Pennsylvania-----	211,726	105,710	317,436	687	-	687	318,123	42,909	361,032	1,693,813	845,683	2,539,496	5,498	-	2,544,994	343,272	2,888,266				
Texas-----	-	-	-	15,906	-	15,906	15,906	26,790	42,696	-	-	-	127,440	-	127,440	214,320	341,760				
Utah-----	-	-	-	43,706	-	43,706	43,706	11,116	54,822	-	-	-	349,650	-	349,650	88,931	438,581				
Wisconsin-----	-	-	-	13,150	-	13,150	13,150	36,943	50,093	-	-	-	105,199	-	105,199	295,542	400,741				
Wyoming-----	27,132	18,294	45,426	102,052	-	102,052	187,478	19,180	166,658	217,056	146,312	363,368	816,459	-	1,179,827	153,440	1,333,267				
Total-----	764,100	314,259	1,078,359	2,081,607	10,451	3,170,417	5,373,375	2,202,998	5,373,375	6,114,720	2,514,791	8,629,511	16,688,150	98,626	25,416,287	17,640,924	43,057,211				

TABLE A-16. - Injury experience and worktime data by general work location at lead-zinc mines and mills in the United States, by State, 1970

State	Fatal				Nonfatal										
	Underground mines			Open pit mines	Total mining activities	Mills	Grand total	Underground mines			Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface						Underground	Surface	Total					
Injuries															
Arizona-----	-	-	-	-	-	-	-	2	-	2	-	2	-	2	2
California-----	-	-	-	-	-	-	-	8	3	11	-	11	-	2	13
Colorado-----	1	1	-	-	-	-	1	213	28	241	-	241	15	256	256
Idaho-----	-	-	-	-	-	-	-	154	4	158	-	158	1	159	159
Illinois-----	1	1	-	-	-	-	1	6	-	6	-	6	2	8	8
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky-----	-	-	-	-	-	-	-	7	-	7	-	7	-	7	7
Maine-----	1	1	-	-	-	-	1	9	-	15	9	15	-	15	15
Missouri-----	3	3	-	-	-	-	3	132	6	138	-	138	19	157	157
Montana-----	-	-	-	-	-	-	-	15	-	15	-	15	3	18	18
Nevada-----	-	-	-	-	-	-	-	4	2	6	-	6	-	6	6
New Jersey-----	1	1	-	-	-	-	1	17	-	17	-	17	-	17	17
New Mexico-----	-	-	-	-	-	-	-	16	64	64	-	64	11	75	75
New York-----	1	1	-	-	-	-	1	35	3	38	-	38	1	39	39
Ohio-----	-	-	-	-	-	-	-	8	3	11	-	11	1	12	12
Oklahoma-----	-	-	-	-	-	-	-	9	-	9	-	9	-	9	9
Pennsylvania-----	1	1	-	-	-	-	1	84	1	85	-	85	11	96	96
Tennessee-----	2	2	-	-	-	-	2	156	9	165	-	165	5	170	170
Utah-----	2	2	-	-	-	-	2	32	5	37	-	37	-	37	37
Virginia-----	-	-	-	-	-	-	-	18	2	20	-	20	-	20	20
Washington-----	3	3	-	-	-	-	3	18	-	27	-	27	-	31	31
Wisconsin-----	-	-	-	-	-	-	-	24	3	-	-	-	4	-	-
Total-----	16	-	16	-	-	16	981	85	1,066	6	-	1,072	75	1,147	1,147
Frequency rates per million man-hours															
Arizona-----	-	-	-	-	-	-	-	84.81	-	81.41	-	76.75	-	76.75	76.75
California-----	-	-	-	-	-	-	-	69.46	186.01	81.78	-	81.99	-	80.05	80.05
Colorado-----	0.55	-	0.44	0.39	-	0.44	-	116.12	66.69	106.91	-	106.90	70.86	99.85	99.85
Idaho-----	-	-	-	-	-	-	-	182.30	12.15	71.80	-	71.76	5.54	66.72	66.72
Illinois-----	28.50	-	23.41	8.54	-	23.41	-	170.97	-	140.47	-	140.47	26.90	68.34	68.34
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky-----	-	-	-	-	-	-	-	144.81	-	113.40	-	113.40	-	94.12	94.12
Maine-----	-	-	-	-	-	-	-	235.75	-	188.60	-	111.85	-	78.98	78.98
Missouri-----	3	-	20.96	7.70	-	7.66	-	48.93	6.35	37.88	69.45	37.88	29.87	36.69	36.69
Montana-----	-	-	0.82	-	-	0.82	-	234.08	-	188.85	-	179.80	20.90	79.30	79.30
Nevada-----	-	-	-	-	-	-	-	178.75	100.89	142.17	-	118.90	-	110.33	110.33
New Jersey-----	4.34	-	3.69	3.45	-	3.69	-	73.70	-	62.66	-	62.66	-	58.60	58.60
New Mexico-----	-	-	-	-	-	-	-	154.88	261.51	172.46	-	168.13	123.37	159.64	159.64
New York-----	1.79	-	1.32	1.15	-	1.32	-	62.74	15.12	50.24	-	50.24	8.92	44.91	44.91
Ohio-----	-	-	-	-	-	-	-	98.39	25.46	55.24	-	55.24	16.94	46.48	46.48
Oklahoma-----	-	-	-	-	-	-	-	34.02	-	27.81	-	27.81	-	23.42	23.42
Pennsylvania-----	3.78	-	3.09	2.60	-	3.09	-	51.43	2.80	42.71	-	42.71	18.84	37.29	37.29
Tennessee-----	1.22	-	1.00	0.82	-	1.00	-	78.40	32.81	72.87	-	72.87	27.59	69.47	69.47
Utah-----	1.01	-	0.88	-	-	0.88	-	83.49	44.28	74.56	-	74.56	-	67.49	67.49
Virginia-----	-	-	-	-	-	-	-	151.46	122.37	147.95	-	147.95	-	73.11	73.11
Washington-----	25.24	-	22.19	10.97	-	15.73	-	145.54	57.24	124.25	-	124.25	32.74	91.32	91.32
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	1.28	-	1.03	0.86	-	1.01	-	78.31	27.62	68.32	38.31	67.95	26.72	61.73	61.73

TABLE A-16. - Injury experience and worktime data by general work location at lead-zinc mines and mills in the United States, by State, 1970 - Continued

State	Fatal				Nonfatal										
	Underground mines			Grand total	Underground mines			Grand total							
	Underground	Surface	Total		Open pit mines	Other surface mining	Total mining activities		Mills						
Severity rates per million man-hours															
Arizona-----	-	-	-	-	-	3,647	-	3,501	-	3,300	-	3,300			
California-----	-	-	-	-	-	955	1,860	9,933	-	1,043	425	3,936			
Colorado-----	3,271	2,662	2,661	2,340	-	5,466	1,991	4,819	-	1,991	656	4,316			
Idaho-----	-	-	-	-	-	2,168	598	1,933	-	1,932	11	1,786			
Illinois-----	170,974	140,466	140,466	51,255	-	57,875	47,548	47,548	-	47,548	1,049	18,016			
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-			
Kentucky-----	-	-	-	-	-	641	-	502	-	502	-	417			
Maine-----	157,167	125,733	44,739	31,591	-	12,416	-	9,933	-	4,802	-	3,391			
Missouri-----	6,672	4,941	4,941	4,206	-	1,729	522	1,416	1,968	1,416	577	1,291			
Montana-----	-	-	-	-	-	2,294	-	1,851	-	1,762	822	1,167			
Nevada-----	-	-	-	-	-	3,217	1,463	2,393	-	2,001	-	1,857			
New Jersey-----	26,013	22,114	22,114	20,682	-	9,764	8,300	8,300	-	7,763	-	7,763			
New Mexico-----	10,755	7,933	7,933	6,909	-	1,558	3,318	1,849	-	1,802	1,637	1,771			
New York-----	-	-	-	-	-	2,165	408	1,704	-	1,704	241	1,515			
Ohio-----	-	-	-	-	-	3,862	492	1,868	-	1,868	1,711	1,832			
Oklahoma-----	-	-	-	-	-	601	-	491	-	491	-	414			
Pennsylvania-----	22,678	18,542	18,542	15,614	-	5,828	45	4,564	-	4,544	1,665	3,891			
Tennessee-----	7,367	6,029	6,029	4,662	-	3,394	1,239	3,133	-	3,131	3,173	3,134			
Utah-----	6,031	5,300	5,296	4,904	-	2,212	301	1,777	-	1,777	-	1,609			
Virginia-----	-	-	-	-	-	3,644	673	3,284	-	3,284	-	1,623			
Washington-----	151,464	133,152	94,378	65,802	-	3,644	1,774	3,129	-	3,129	909	2,350			
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	-	-			
Combined rate-----	7,664	6,152	6,085	5,166	-	3,494	787	2,960	1,086	2,939	966	2,641			
Average men working daily															
Active operations				Average men working daily				Average days active							
Mines	Mills	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
		Underground	Surface	Total											
12	-	17	2	19	-	4	23	-	23	162	-	-	46	142	-
7	1	57	8	65	1	3	69	300	83	252	300	20	243	252	252
38	9	843	194	1,037	2	2	1,041	10	1,185	271	10	10	270	268	268
38	7	934	164	1,098	4	3	1,105	12	1,202	251	12	39	249	233	233
4	1	20	3	23	-	-	34	-	57	232	-	-	232	273	273
1	1	20	5	25	-	-	25	-	25	259	-	-	259	-	-
1	1	22	6	28	-	-	28	-	25	259	-	-	259	-	-
2	1	18	5	23	39	-	62	277	86	276	277	-	276	316	316
17	7	1,184	442	1,626	-	-	62	259	240	279	-	-	279	291	291
23	3	147	10	57	5	6	68	28	186	175	28	60	154	332	332
10	1	13	11	24	4	2	30	180	32	220	180	156	210	245	245
1	1	96	19	115	-	-	115	-	123	294	-	-	294	284	284
13	3	177	23	200	4	2	206	74	280	232	152	293	305	305	305
2	2	229	81	310	4	2	310	46	356	305	-	-	305	305	305
3	2	41	51	92	-	-	92	28	120	271	-	-	271	262	262
1	1	113	26	139	-	-	139	23	162	291	-	-	291	330	330
9	5	772	167	939	-	-	939	235	1,174	265	-	-	265	311	311
17	3	930	130	1,060	-	4	1,064	81	1,155	267	-	62	266	280	280
1	1	188	55	243	-	-	243	26	259	255	-	-	255	250	250
4	2	63	10	73	19	-	92	32	124	231	365	-	259	324	324
9	4	87	25	112	-	-	112	66	178	237	-	-	237	229	229
213	55	5,871	1,437	7,308	78	26	7,412	1,233	8,645	267	251	73	266	284	284
Total or average-----															

TABLE A-16. - Injury experience and worktime data by general work location at lead-zinc mines and mills in the United States, by State, 1970 - Continued

State	Man-days worked										Man-hours worked				
	Underground mines				Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities
	Underground	Surface	Total	Grand total						Underground	Surface	Total			
Arizona-----	2,948	123	3,071	3,257	-	186	3,257	-	3,257	23,593	984	24,567	-	1,491	26,058
California-----	14,396	2,016	16,412	20,299	300	59	16,771	3,598	20,299	11,156	16,128	27,284	-	471	27,755
Colorado-----	229,108	52,337	281,465	320,097	20	20	281,505	38,592	320,097	1,834,309	415,846	2,250,155	160	160	2,250,315
Idaho-----	234,032	41,135	275,167	297,904	46	118	275,351	22,553	297,904	1,975,266	325,242	2,300,508	368	944	2,301,452
Illinois-----	4,387	322	4,709	5,135	-	-	4,709	9,293	5,135	14,632	42,715	57,347	-	-	112,047
Kansas-----	3,176	1,544	4,720	6,470	-	-	4,720	-	6,470	31,093	10,352	41,445	-	-	51,760
Kentucky-----	6,742	1,573	8,315	9,295	-	-	9,295	1,580	10,875	48,340	13,387	61,727	-	-	75,112
Maine-----	6,742	1,573	8,315	9,295	-	-	9,295	1,580	10,875	48,340	13,387	61,727	-	-	75,112
Massachusetts-----	38,876	118,165	157,041	23,741	10,799	-	16,764	6,977	23,741	38,176	9,544	47,720	86,392	-	134,112
Minnesota-----	8,026	2,922	10,948	533,493	-	-	533,493	79,456	533,493	2,697,932	945,311	3,643,243	-	-	3,643,243
Montana-----	2,796	2,796	5,592	28,394	140	360	10,407	17,946	28,394	64,082	15,346	79,428	1,120	2,880	83,428
Nevada-----	2,796	2,796	5,592	28,394	140	360	10,407	17,946	28,394	64,082	15,346	79,428	1,120	2,880	83,428
New Jersey-----	38,837	5,145	43,982	33,796	720	313	33,796	2,269	36,065	230,651	40,667	271,318	5,760	2,502	276,880
New Mexico-----	38,837	5,145	43,982	33,796	720	313	33,796	2,269	36,065	230,651	40,667	271,318	5,760	2,502	276,880
New York-----	10,163	24,803	34,966	58,824	608	586	47,679	11,145	58,824	309,915	61,182	371,097	4,864	4,692	375,789
North Carolina-----	10,163	24,803	34,966	58,824	608	586	47,679	11,145	58,824	309,915	61,182	371,097	4,864	4,692	375,789
Ohio-----	10,163	24,803	34,966	58,824	608	586	47,679	11,145	58,824	309,915	61,182	371,097	4,864	4,692	375,789
Oklahoma-----	33,071	7,376	40,447	48,033	-	-	48,033	7,586	55,619	81,308	117,824	199,132	-	-	256,940
Pennsylvania-----	204,173	44,624	248,797	321,783	-	-	321,783	72,986	321,783	1,633,382	356,989	1,990,371	-	-	1,990,371
Tennessee-----	248,739	34,354	283,093	305,993	-	247	283,340	22,653	305,993	1,989,868	274,327	2,264,195	-	1,772	2,265,967
Texas-----	47,911	14,116	62,027	68,533	-	-	62,027	6,506	68,533	112,929	16,344	129,273	55,538	-	184,811
Virginia-----	16,854	2,043	18,897	34,192	6,942	-	23,839	10,353	34,192	118,840	52,412	171,252	-	-	190,722
Washington-----	20,278	6,241	26,519	41,645	-	-	26,519	15,126	41,645	164,898	52,412	217,310	-	-	217,310
Wisconsin-----	1,563,973	384,404	1,948,377	2,320,235	19,575	1,889	1,969,841	350,394	2,320,235	12,526,357	3,077,693	15,604,050	156,602	14,912	15,775,564
Total-----															

TABLE A-17. - Injury experience and worktime data by general work location at uranium mines and mills in the United States, by State, 1970

State	Fatal										Nonfatal									
	Underground mines				Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total			
	Underground	Surface	Total	Grand total						Underground	Surface	Total								
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
California-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado-----	1	1	2	2	-	-	2	2	2	33	1	34	-	-	34	19	53	-	-	-
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico-----	4	-	4	4	-	-	4	4	4	55	3	58	2	1	61	20	81	-	-	-
New York-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin-----	1	-	1	1	-	-	1	1	1	35	1	36	38	5	79	18	97	-	-	-
Total-----	5	1	6	6	2	-	8	8	8	157	11	168	45	7	220	72	292	-	-	-

TABLE A-17. - Injury experience and worktime data by general work location at uranium mines and mills in the United States, by State, 1970 - Continued

State	Fatal					Nonfatal							
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Grand total	
	Underground	Surface							Underground	Surface			Total
		Surface	Total							Surface	Total		
Frequency rates per million man-hours													
Alaska-----	-	-	-	-	-	-	-	-	-	383.73	309.60	309.60	-
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-
California-----	-	492.13	82.02	-	-	82.02	-	-	-	-	-	-	4.77
Colorado-----	-	-	-	-	-	-	-	-	-	3.29	26.87	26.65	19.29
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico-----	1.89	-	1.54	-	-	1.30	-	.95	26.02	6.22	22.34	4.09	574.05
New York-----	-	-	-	-	-	-	-	-	-	-	-	-	298.15
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	19.76
North Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	17.67
Ohio-----	-	-	-	-	-	-	-	-	-	-	-	-	34.26
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	90.41
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	35.79
Pennsylvania-----	-	-	-	-	-	-	-	-	-	-	-	-	18.14
Rhode Island-----	-	-	-	-	-	-	-	-	-	-	-	-	6.30
South Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	44.39
South Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	44.76
Tennessee-----	-	-	-	-	-	-	-	-	-	-	-	-	37.17
Texas-----	-	-	-	-	-	-	-	-	-	-	-	-	44.76
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	37.17
Vermont-----	-	-	-	-	-	-	-	-	-	-	-	-	44.76
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	44.76
West Virginia-----	3.35	-	2.97	-	-	.52	-	.32	117.36	26.10	106.97	24.69	40.98
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	14.64
Combined rate-----	1.26	1.08	1.23	.89	-	1.11	-	.69	39.66	11.84	34.38	19.96	30.50
													16.42
													25.18
Severity rates per million man-hours													
Alaska-----	-	-	-	-	-	-	-	-	-	1,535	1,238	-	1,238
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-
California-----	-	2,952,756	492,126	-	-	492,126	-	492,126	-	-	-	-	98
Colorado-----	-	-	-	-	-	-	-	-	-	40	814	-	893
Illinois-----	-	-	-	-	-	-	-	-	-	1,058	-	-	-
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico-----	11,356	-	9,246	-	-	7,773	-	5,688	1,295	193	1,090	113	574
New York-----	-	-	-	-	-	-	-	-	-	-	-	-	500
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	818
North Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island-----	-	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermont-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	20,118	-	17,828	-	-	3,113	-	1,900	2,240	104	1,997	886	1,890
Combined rate-----	7,579	6,460	7,366	5,321	-	6,655	-	4,139	1,691	146	1,398	639	1,148
													676
													970

TABLE A-18. - Injury experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by State, 1970 - Continued

State	Fatal				Nonfatal										
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Total mining activities	Mills	Grand total	
	Underground	Surface	Total						Underground	Surface	Total				
Frequency rates per million man-hours															
Alabama-----	-	-	-	-	-	-	-	-	-	123.70	373.13	-	173.37	19.66	7.13
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	149.01	83.86
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas-----	-	-	-	-	-	-	34.62	27.69	-	78.06	28.82	34.62	27.69	20.37	19.06
California-----	-	-	-	-	-	-	78.06	28.82	-	70.08	66.86	78.06	28.82	23.82	48.96
Colorado-----	1.33	-	1.19	-	-	1.16	33.64	35.72	-	33.64	33.86	35.72	33.86	33.68	13.09
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho-----	-	-	-	-	-	-	135.14	-	-	-	-	-	-	43.87	23.70
Iowa-----	-	-	-	-	-	.28	-	-	-	-	-	-	-	-	4.71
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	-	-	-	-	-	-	134.05	23.82	-	-	-	-	-	114.16	179.10
New Jersey-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.31
New Mexico-----	-	-	-	-	-	-	-	-	-	-	-	-	-	30.23	60.03
New York-----	-	-	-	-	-	-	-	-	-	-	-	-	-	14.34	25.16
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	-	3.66	6.80
North Dakota-----	-	-	-	-	-	-	195.78	63.74	-	-	-	-	-	161.03	100.47
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	33.75	120.29
South Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	34.21	38.34
Texas-----	-	-	-	-	-	-	123.58	-	-	-	-	-	-	110.47	9.60
Utah-----	-	-	-	-	-	-	191.08	-	-	-	-	-	-	75.42	13.13
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	.91	-	.79	-	-	.52	56.04	38.94	-	53.78	27.07	-	42.84	12.49	23.42
Severity rates per million man-hours															
Alabama-----	-	-	-	-	-	-	11,226	5,348	-	10,055	39	-	39	432	417
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	8,643	6,608
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas-----	-	-	-	-	-	-	1,679	1,571	-	1,343	1,658	-	1,576	1,458	1,458
California-----	-	-	-	-	-	-	2,820	1,571	-	2,617	10,190	-	4,082	849	2,738
Colorado-----	7,993	-	7,129	-	-	6,974	1,784	1,495	-	1,753	1,743	-	1,743	3,019	2,015
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia-----	-	-	-	-	-	-	676	-	-	625	-	-	-	-	-
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	1,662	-	-	-	-	-	-	219	71	123
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	245	245
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	-	-	-	-	-	-	3,152	715	-	2,778	7,691	-	3,503	7,400	4,445
New Jersey-----	-	-	-	-	-	-	-	-	-	-	-	-	-	78	78
New Mexico-----	-	-	-	-	-	-	-	-	-	-	-	-	-	544	505
New York-----	-	-	-	-	-	-	-	-	-	-	549	-	544	421	405
North Carolina-----	-	-	-	-	-	-	-	-	-	-	446	-	446	367	367
North Dakota-----	-	-	-	-	-	-	-	-	-	-	335	-	3,959	3,729	3,729
Oregon-----	-	-	-	-	-	-	3,952	2,958	-	3,690	-	-	331	115,482	6,448
South Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas-----	-	-	-	-	-	-	1,946	-	-	1,815	-	-	1,740	357	370
Utah-----	-	-	-	-	-	-	191	-	-	191	-	-	75	210	190
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	5,467	-	4,746	-	-	3,115	877	1,683	-	2,110	1,781	-	1,881	832	1,210

TABLE A-18. - Injury experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by State, 1970 - Continued

State	Active operations		Average men working daily										Average days active						
	Mines	Mills	Underground mines					Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
			Underground		Surface	Total	Underground mines												
			Underground	Surface			Underground												Surface
Alabama-----	7	2	-	-	-	23	-	23	434	457	-	213	260	-	260	364	364		
Alaska-----	7	3	16	3	19	5	-	26	13	39	213	103	90	182	158	158			
Arizona-----	6	-	2	-	2	2	-	6	-	6	36	52	10	33	-	33			
Arkansas-----	4	-	57	14	71	198	-	269	1,055	1,324	254	250	-	231	236	236			
California-----	179	19	370	69	439	129	3	571	315	886	244	199	10	232	300	300			
Colorado-----	5	-	1,141	157	1,298	13	-	1,317	323	1,640	324	167	15	321	355	355			
Florida-----	2	-	-	-	-	-	-	149	149	-	-	-	358	358	-	-			
Georgia-----	2	3	-	-	-	3	3	20	23	70	-	100	365	331	348	348			
Idaho-----	5	2	8	1	9	3	3	7	19	36	111	304	134	150	310	310			
Louisiana-----	3	-	-	-	-	-	-	-	1,236	1,236	-	-	-	-	365	365			
Montana-----	4	1	2	-	-	3	-	5	4	9	172	132	-	148	236	236			
Nevada-----	60	9	150	28	178	54	9	241	76	317	191	114	93	170	171	171			
New Jersey-----	1	1	-	-	-	21	-	21	18	39	-	335	-	335	231	231			
New Mexico-----	4	-	6	2	8	308	-	316	145	461	115	359	-	353	361	361			
New York-----	2	1	2	-	-	129	-	131	139	270	68	264	-	261	265	265			
North Carolina-----	1	1	-	-	-	119	-	119	39	158	313	160	-	313	160	160			
Oregon-----	7	2	3	-	-	73	2	78	5	83	10	250	110	237	208	208			
South Dakota-----	2	-	-	-	-	3	3	3	1,338	1,369	155	62	10	163	360	360			
Texas-----	5	-	26	2	28	8	-	31	37	76	163	251	-	207	317	317			
Utah-----	4	1	8	-	-	8	8	16	12	19	-	345	-	345	314	314			
Virginia-----	1	1	-	-	-	1	-	-	-	11	168	10	-	154	-	-			
Washington-----	3	-	8	2	10	1	-	-	-	-	-	-	-	-	-	-			
Total or average-----	224	65	1,888	308	2,196	985	201	3,382	5,276	8,658	287	271	313	284	324	324			

State	Man-days worked			Man-hours worked					Average days active									
	Underground	Surface	Total	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total		
									Underground	Surface	Underground						Total	
											Underground							Surface
Alabama-----	3,234	804	4,038	5,983	180	5,983	157,816	163,799	32,337	8,040	40,377	50,862	-	50,862	1,262,530	1,313,392		
Alaska-----	72	-	72	516	20	4,734	2,048	6,782	575	196	730	1,440	-	1,440	46,977	70,825		
Arizona-----	14,445	3,611	18,056	49,424	-	67,480	249,250	316,730	115,555	28,889	144,444	395,562	160	1,565	1,565	1,565		
Arkansas-----	89,610	17,361	106,971	25,722	30	132,723	94,550	227,273	717,374	138,790	856,164	205,501	240	540,006	1,994,006	2,534,012		
California-----	375,309	45,494	420,803	2,168	-	423,061	114,616	537,677	3,002,469	363,957	3,366,426	17,348	840	1,061,905	755,744	1,817,649		
Colorado-----	-	-	-	-	-	53,326	-	53,326	-	-	-	-	-	426,604	916,934	4,301,548		
Florida-----	-	-	-	300	7,308	7,608	16,359	23,967	-	-	-	2,400	58,464	60,864	130,875	191,739		
Georgia-----	925	75	1,000	912	937	2,849	5,274	8,123	7,400	600	8,000	7,296	7,499	22,795	42,192	64,987		
Idaho-----	-	-	-	-	-	-	451,141	451,141	-	-	-	-	-	-	3,609,125	3,609,125		
Louisiana-----	-	-	-	-	-	-	944	944	2,762	41,984	27,239	3,163	-	5,925	7,552	13,477		
Montana-----	345	5,215	345	6,157	837	40,998	13,009	54,007	231,255	41,984	273,239	52,922	6,697	332,858	106,084	438,942		
Nevada-----	28,759	-	28,759	7,043	-	7,043	11,208	163,957	6,240	1,120	7,360	885,780	-	893,140	56,345	89,661		
New Jersey-----	-	-	-	-	-	-	52,315	170,943	1,096	272,288	298,083	272,288	-	298,083	294,163	567,547		
New Mexico-----	780	140	920	110,722	-	111,642	36,770	70,943	219,639	78,444	298,083	146,164	1,760	148,164	8,313	347,848		
New York-----	137	37,261	37,261	34,036	-	37,261	6,221	43,482	240	-	240	3,840	80	3,920	3,920	3,920		
North Carolina-----	27,455	9,806	37,261	18,217	220	18,467	1,039	19,506	240	-	240	3,840	-	36,208	3,853,186	3,889,394		
Oregon-----	30	-	30	480	10	490	-	490	-	-	-	16,050	-	26,517	152,306	178,823		
South Dakota-----	-	-	-	-	-	-	481,648	481,648	32,368	2,352	34,720	1,488	-	36,208	3,853,186	3,889,394		
Texas-----	4,046	294	4,340	2,006	186	2,192	19,038	22,349	10,467	-	-	10,467	-	26,517	152,306	178,823		
Utah-----	1,305	-	1,305	2,412	-	2,412	3,772	6,184	9,970	3,476	13,446	19,298	-	19,298	30,183	49,481		
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-		
Washington-----	1,246	435	1,681	960,714	62,958	960,714	1,709,975	2,670,689	4,389,747	667,652	5,057,399	2,142,377	503,784	7,703,560	13,688,648	21,392,208		
Total-----	547,728	83,235	630,963	266,793	62,958	960,714	1,709,975	2,670,689	4,389,747	667,652	5,057,399	2,142,377	503,784	7,703,560	13,688,648	21,392,208		

TABLE A-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1970

State	Fatal					Nonfatal									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Total mining activities	Mills	Grand total	
	Underground	Surface	Total						Underground	Surface	Total				
Injuries															
Alabama-----	-	-	-	-	-	-	-	-	8	1	9	8	17	10	27
Alaska-----	-	-	-	-	-	-	-	-	4	4	8	-	12	2	22
Arizona-----	5	-	5	2	-	7	1	8	379	20	399	227	626	137	763
Arkansas-----	-	-	-	-	-	-	-	-	4	-	4	7	11	40	51
California-----	-	1	1	1	-	2	1	3	69	7	76	50	126	30	156
Colorado-----	5	1	5	-	-	5	1	6	361	42	403	1	404	49	453
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	2	2	-	2
Idaho-----	1	1	1	-	-	1	1	1	350	9	359	-	359	6	365
Illinois-----	1	1	1	-	-	1	1	1	6	-	6	-	6	2	8
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	-	-	-	7	-	7	-	-	-	7
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine-----	1	-	1	-	-	1	1	1	9	-	9	6	15	17	17
Michigan-----	3	-	3	-	-	3	-	-	168	12	180	41	223	91	314
Minnesota-----	-	-	-	5	-	5	3	8	-	-	-	52	52	34	86
Missouri-----	4	-	4	-	-	4	-	-	314	39	353	-	353	33	386
Montana-----	2	-	2	-	-	2	-	2	79	5	84	57	142	29	171
Nebraska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	1	1	1	3	-	4	-	4	40	3	43	25	69	39	108
New Jersey-----	1	-	1	-	-	-	-	-	17	-	-	-	17	2	19
New Mexico-----	5	-	5	-	-	5	-	-	230	33	263	55	319	80	399
New York-----	1	1	1	-	-	1	1	1	41	3	44	2	46	4	50
North Carolina-----	-	-	-	-	-	-	-	-	44	5	49	-	49	5	54
Oklahoma-----	-	-	-	-	-	-	-	-	8	3	11	4	13	1	16
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
Pennsylvania-----	1	1	1	-	-	1	1	1	15	3	18	-	18	2	20
South Dakota-----	3	-	3	-	-	3	3	3	81	9	90	-	90	8	98
Tennessee-----	2	-	2	-	-	2	-	-	91	1	92	-	92	11	103
Texas-----	-	-	-	2	-	-	-	-	4	-	4	7	11	39	50
Utah-----	2	-	2	-	-	2	1	3	190	13	203	21	224	17	241
Virginia-----	-	-	-	-	-	-	-	-	32	5	37	-	37	-	37
Washington-----	3	-	3	-	-	3	-	3	35	3	38	-	38	4	42
Wisconsin-----	-	-	-	-	-	-	-	-	24	3	27	1	28	9	37
Wyoming-----	1	-	1	-	-	1	-	-	53	3	56	39	100	18	118
Total-----	43	1	44	13	-	57	8	65	2,663	226	2,889	610	3,521	722	4,243

TABLE A-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1970 - Continued

State	Fatal					Nonfatal											
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface							Underground	Surface							Total
Severity rates per million man-hours																	
Alabama-----	-	-	-	-	-	-	-	-	2,237	250	1,936	605	-	1,477	421	815	
Alaska-----	-	-	-	-	-	-	-	-	10,614	4,415	9,142	-	-	4,388	2,600	4,242	
Arizona-----	4,174	-	3,446	861	-	1,853	614	1,480	1,582	2,169	1,685	745	-	1,105	635	963	
Arkansas-----	-	-	-	-	-	-	-	-	1,679	-	1,679	-	-	1,434	1,198	1,244	
California-----	-	33,934	5,541	3,789	-	4,457	2,491	3,528	2,551	1,403	2,363	3,840	-	3,209	1,457	1,909	
Colorado-----	4,978	-	4,182	-	-	4,143	2,603	3,771	2,790	1,214	2,538	887	-	2,520	1,735	2,330	
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Idaho-----	1,686	-	1,422	-	-	1,410	-	1,299	3,256	483	2,822	200	-	96	163	55	
Illinois-----	170,974	-	140,466	-	-	139,942	-	51,185	57,875	-	47,548	-	-	27,370	1,049	17,992	
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kentucky-----	-	-	-	-	-	-	-	-	641	-	502	-	-	502	-	417	
Louisiana-----	-	-	-	-	-	-	1,662	1,662	-	-	-	-	-	-	245	245	
Maine-----	157,167	-	125,733	-	-	44,739	-	31,591	12,416	-	9,933	1,968	-	4,802	-	3,391	
Michigan-----	3,462	-	3,007	-	-	2,466	-	1,600	1,186	1,574	1,237	1,324	148	1,246	446	965	
Minnesota-----	-	-	-	2,495	-	2,467	1,822	2,178	-	-	-	338	-	334	155	254	
Missouri-----	5,500	-	3,973	-	-	3,973	-	3,355	1,962	583	1,579	-	-	1,579	509	1,413	
Montana-----	7,999	-	4,151	-	-	1,870	-	1,457	3,404	106	1,818	589	1,945	1,146	3,076	1,572	
Nebraska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nevada-----	15,240	-	12,388	6,917	-	7,655	-	4,900	2,456	651	2,118	378	21	641	1,791	1,055	
New Jersey-----	26,013	-	22,114	-	-	18,311	-	15,799	9,764	-	8,300	-	-	6,873	134	5,948	
New Mexico-----	9,992	-	7,996	-	-	4,113	-	2,958	1,891	902	1,693	604	72	1,163	2,067	1,417	
New York-----	5,928	-	4,621	-	-	3,469	-	2,071	1,789	283	1,593	313	-	1,172	124	750	
North Carolina-----	-	-	-	-	-	-	-	-	3,803	2,825	3,552	-	-	3,552	3,959	3,607	
Oklahoma-----	-	-	-	-	-	-	-	-	3,862	492	1,868	2,582	-	2,109	1,378	1,937	
Oregon-----	1,430,615	-	1,430,615	-	-	38,065	-	36,130	-	-	-	335	-	311	113,731	6,076	
Pennsylvania-----	3,064	-	2,096	-	-	2,092	-	1,833	353	355	353	-	-	353	235	338	
South Dakota-----	8,297	-	5,106	-	-	5,071	-	4,436	2,430	135	1,548	-	-	1,537	203	1,370	
Tennessee-----	5,180	-	4,091	-	-	3,956	-	3,209	4,110	26	3,252	-	-	3,252	1,205	2,810	
Texas-----	-	-	-	44,788	-	39,556	-	2,663	1,946	26	1,815	11,316	-	10,202	376	1,038	
Utah-----	-	-	-	-	-	1,368	1,512	1,368	3,495	956	3,173	402	-	1,295	211	969	
Virginia-----	4,637	-	4,048	-	-	1,306	-	-	2,212	301	1,777	-	-	1,711	-	1,476	
Washington-----	-	-	-	-	-	47,075	-	30,538	2,162	434	2,765	-	-	2,176	797	1,691	
Wisconsin-----	70,005	-	59,827	-	-	-	-	-	3,560	1,774	3,129	951	-	2,419	1,592	1,952	
Wyoming-----	11,636	-	8,568	-	-	1,931	-	1,336	1,856	471	1,491	582	96	779	791	782	
Combined rate-----	5,749	473	4,588	1,584	-	3,173	838	2,362	2,358	781	2,010	729	807	1,414	721	1,173	

TABLE A-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1970 - Continued

State	Active operations			Average men working daily							Average days active					
	Under-ground mines	Surface mines	Mills	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills
				Underground	Surface	Total										
Alabama-----	1	10	4	241	43	284	107	20	611	484	895	244	267	94	243	357
Alaska-----	8	56	3	23	14	37	33	132	202	13	215	124	127	163	150	158
Arizona-----	76	83	28	2,895	611	3,506	5,042	40	8,588	3,509	12,097	310	344	78	329	348
Arkansas-----	1	9	5	57	14	71	223	7	301	1,199	1,500	254	249	53	246	252
California-----	87	104	28	498	99	597	633	45	1,275	953	2,228	227	313	73	264	316
Colorado-----	368	97	28	2,780	594	3,374	49	94	3,517	871	4,388	265	121	28	257	330
Florida-----	-	2	-	-	-	-	-	149	149	-	149	-	-	-	-	-
Georgia-----	-	5	3	-	-	-	33	40	73	47	120	-	300	358	358	-
Idaho-----	67	36	13	1,705	315	2,020	23	34	2,077	175	2,252	261	120	56	278	348
Illinois-----	4	2	1	20	3	23	-	2	25	34	59	232	120	10	214	273
Kansas-----	1	-	-	20	5	25	-	-	25	-	25	259	-	-	259	-
Kentucky-----	1	-	1	22	6	28	-	-	28	5	33	276	-	-	276	316
Louisiana-----	-	-	3	-	-	-	-	-	-	1,236	1,236	-	-	-	-	365
Maine-----	1	1	1	18	5	23	39	-	62	24	86	259	277	-	270	291
Michigan-----	7	5	9	2,146	355	2,501	720	21	3,242	1,398	4,640	299	221	242	281	353
Minnesota-----	-	31	21	-	67	67	4,610	-	4,677	3,660	8,337	257	326	-	325	337
Missouri-----	19	-	9	1,880	751	2,631	-	-	2,631	416	3,047	286	-	-	286	334
Montana-----	82	30	10	767	681	1,448	1,291	48	2,787	643	3,430	249	340	43	288	353
Nebraska-----	-	2	-	-	-	-	-	2	2	-	2	-	-	10	10	-
Nevada-----	63	79	17	259	57	316	1,016	43	1,375	652	2,027	194	314	141	281	337
New Jersey-----	1	1	2	96	19	115	21	-	136	26	162	294	335	-	300	247
New Mexico-----	60	50	18	1,508	336	1,844	1,385	33	3,262	1,191	4,453	255	318	57	280	299
New York-----	4	2	5	475	128	603	202	-	805	540	1,345	269	267	-	269	270
North Carolina-----	2	-	1	97	32	129	-	-	129	39	168	310	-	-	310	160
North Dakota-----	3	1	3	41	51	92	42	-	134	42	176	271	302	-	280	276
Oklahoma-----	11	21	3	14	14	28	74	18	106	6	112	38	246	51	186	176
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania-----	3	1	3	833	364	1,197	9	-	1,206	145	1,351	299	76	-	297	348
Rhode Island-----	6	25	3	870	543	1,413	10	21	1,434	177	1,611	311	248	17	307	356
South Dakota-----	15	-	6	1,110	294	1,404	-	-	1,404	317	1,721	261	-	-	261	318
Tennessee-----	3	18	9	26	2	28	171	9	208	1,524	1,732	155	183	10	171	345
Texas-----	126	53	10	1,316	197	1,513	2,232	38	3,783	1,427	5,210	245	348	15	304	348
Utah-----	1	1	2	188	55	243	7	-	250	38	288	255	345	-	258	270
Virginia-----	1	1	1	132	23	155	38	5	198	79	277	243	240	186	241	328
Washington-----	9	7	5	87	25	112	50	-	162	167	329	237	263	-	245	312
Wisconsin-----	9	1	-	278	91	369	950	115	1,434	498	1,932	234	280	55	250	307
Wyoming-----	13	101	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Total or average-----	1,052	834	266	20,402	5,780	26,182	19,010	916	46,108	21,535	67,643	275	321	134	291	331

TABLE A-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1970 - Continued

State	Man-days worked						Man-hours worked					
	Underground mines			Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground	Surface	Total		Underground	Surface	Total					
Alabama-----	58,836	10,513	69,349	272,709	470,684	84,105	554,789	256,331	20,702	831,822	1,399,250	2,231,072
Alaska-----	3,462	1,330	4,792	32,391	34,201	10,646	44,847	40,480	182,431	267,758	23,848	291,606
Arizona-----	898,522	189,637	1,088,159	4,047,604	7,187,547	1,517,115	8,704,662	13,930,850	24,852	22,660,364	9,773,421	32,435,785
Arkansas-----	14,445	3,611	18,056	375,713	115,555	28,889	144,444	445,144	2,960	592,548	2,413,327	3,005,875
California-----	113,415	22,069	135,484	637,970	906,084	176,816	1,082,900	1,583,705	26,064	2,692,669	2,408,846	5,101,515
Colorado-----	752,797	142,973	895,770	1,191,744	6,026,305	1,146,601	7,172,906	47,343	21,005	7,241,254	2,303,385	9,546,639
Florida-----	-	-	-	53,326	-	-	-	-	426,604	426,604	-	426,604
Georgia-----	445,229	82,543	527,772	36,677	3,558,762	660,047	4,218,789	85,074	92,847	177,921	130,875	308,796
Idaho-----	4,387	952	5,339	577,663	14,652	7,622	42,715	21,590	14,911	4,255,290	361,879	4,617,169
Illinois-----	5,176	1,294	6,470	14,652	41,408	10,352	51,760	-	160	42,875	74,347	117,222
Kansas-----	6,042	1,673	7,715	9,293	48,340	13,387	61,727	-	-	51,760	-	51,760
Kentucky-----	-	-	-	451,141	-	-	-	-	-	-	-	-
Louisiana-----	4,772	1,193	5,965	23,741	38,176	9,544	47,720	86,392	-	134,112	3,609,125	3,609,125
Maine-----	649,947	98,260	748,207	1,406,361	5,199,576	786,080	5,985,656	1,272,993	40,661	7,299,310	3,951,589	11,250,899
Michigan-----	-	-	-	2,755,271	-	-	-	12,022,972	-	12,022,972	9,881,586	22,042,193
Minnesota-----	543,831	209,479	753,310	8,230,303	4,363,944	1,676,708	6,040,652	3,508,459	18,510	6,040,652	1,113,375	7,154,027
Missouri-----	187,334	173,808	361,142	1,038,638	1,590,437	2,890,590	4,481,027	3,508,459	-	6,417,559	1,816,520	8,234,079
Montana-----	-	-	-	20	-	-	-	-	160	-	-	160
Nebraska-----	49,995	11,293	61,288	605,968	393,713	90,608	484,321	2,602,356	48,358	3,135,035	1,762,486	4,897,521
Nevada-----	28,651	5,145	33,796	47,273	230,651	40,667	271,318	36,345	-	327,663	52,100	379,763
New Jersey-----	376,486	93,705	470,191	1,267,415	3,002,320	749,772	3,752,092	3,328,222	13,796	7,294,960	2,845,587	10,140,547
New Mexico-----	126,525	35,765	162,290	362,196	1,012,203	286,117	1,298,320	431,416	-	1,728,736	1,167,808	2,896,544
New York-----	29,711	10,264	39,975	46,196	237,467	62,111	319,578	101,489	-	318,796	43,763	362,563
North Carolina-----	10,163	14,728	24,891	49,148	81,308	117,824	199,132	101,489	-	180,621	92,871	293,492
Oklahoma-----	534	-	534	20,737	4,194	11,824	16,018	146,484	7,189	157,627	8,441	166,068
Oregon-----	244,797	113,086	357,883	50,493	1,958,387	904,693	2,863,080	3,498	-	2,866,526	403,960	3,270,486
Pennsylvania-----	270,595	169,361	439,956	505,846	2,163,561	1,355,631	3,519,192	21,840	2,830	3,549,884	508,730	4,058,614
South Dakota-----	289,601	77,027	366,628	467,498	2,136,729	616,252	2,752,981	367,930	770	2,933,004	806,726	3,739,730
Tennessee-----	4,046	294	4,340	361,844	523,638	376,322	2,964,486	6,222,026	4,492	9,191,202	3,862,422	13,053,624
Texas-----	323,350	47,239	370,589	495,453	2,588,054	112,926	2,700,980	16,298	-	2,717,276	82,513	2,800,793
Utah-----	47,911	14,116	62,027	64,439	252,720	47,765	300,485	38,372	7,438	382,912	207,663	590,575
Virginia-----	32,138	5,468	37,606	73,881	252,720	53,412	306,132	105,199	-	322,504	417,701	740,232
Washington-----	63,512	22,890	86,402	91,728	164,888	53,412	218,300	2,355,645	51,909	3,107,831	1,383,258	4,491,089
Wisconsin-----	-	-	-	511,350	515,669	184,658	700,277	2,355,645	-	-	-	-
Wyoming-----	-	-	-	20,552,527	44,874,014	12,672,282	57,546,296	49,238,904	1,008,599	107,793,799	57,297,140	165,090,939
Total-----	5,606,488	1,582,961	7,189,449	6,103,829	122,766	13,416,046	13,538,875	6,103,829	-	-	-	-

TABLE A-20. - Injury experience and worktime data on primary nonferrous smelters, refineries, and reduction plants in the United States, by mineral industry, 1970

Mineral industry group	Injuries		Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Copper-----	5	554	0.16	17.32	938	1,170
Lead-----	1	120	.14	16.77	838	1,258
Zinc-----	-	361	-	21.33	-	689
Aluminum-----	-	408	-	6.50	-	366
Miscellaneous metals-----	2	82	.34	13.90	2,034	455
Total or combined-----	8	1,525	.06	12.23	385	671
Mineral industry group	Active smelters	Average men working daily	Average active plant days	Man-days worked	Man-hours worked	
Copper-----	28	11,744	340	3,997,401	31,979,199	
Lead-----	11	2,644	338	894,715	7,157,726	
Zinc-----	19	5,896	359	2,116,008	16,928,182	
Aluminum-----	25	22,281	352	7,841,100	62,728,336	
Miscellaneous metals-----	9	2,109	350	737,293	5,898,506	
Total or average-----	92	44,674	349	15,586,517	124,691,949	

TABLE A-21. - Injuries by main cause at primary nonferrous smelters, refineries, and reduction plants in the United States, by degree of injury and mineral industry, 1970

Degree of injury and mineral industry	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or dust	Electricity	Machinery	Suffocation (no flame or smoldering)	Fires or suffocation from fires	Miscellaneous causes	Total
Fatal and nonfatal:														
Copper-----	32	110	152	29	10	3	49	-	4	64	1	6	99	559
Lead-----	9	18	16	12	1	1	10	2	-	13	13	3	23	121
Zinc-----	15	60	107	16	11	2	31	1	2	27	1	7	81	361
Aluminum-----	16	87	124	15	9	-	24	1	6	43	4	8	71	408
Miscellaneous metals-----	2	14	18	6	2	-	5	-	-	8	5	1	23	84
Total-----	74	289	417	78	33	6	119	4	12	155	24	25	297	1,533
Fatal:														
Copper-----	-	1	-	-	-	-	1	-	-	2	1	-	-	5
Lead-----	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Zinc-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum-----	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	-	-	-	1	2
Total-----	-	1	-	-	-	-	2	-	-	3	1	-	1	8
Permanent total 1/-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Permanent partial:														
Copper-----	1	3	6	1	-	-	4	-	-	12	-	-	-	27
Lead-----	-	1	2	1	-	-	1	-	-	2	-	-	-	7
Zinc-----	1	2	3	-	-	-	3	-	-	2	-	-	1	11
Aluminum-----	1	2	3	-	-	-	3	-	-	10	-	-	-	19
Miscellaneous metals-----	-	-	-	1	1	-	-	-	-	1	-	-	-	3
Total-----	3	8	14	3	1	-	10	-	-	27	-	-	1	67
Temporary total:														
Copper-----	31	106	146	28	10	3	44	-	4	50	-	6	99	527
Lead-----	9	17	14	11	1	1	8	2	-	11	13	3	23	113
Zinc-----	14	58	104	16	11	2	29	1	2	25	1	7	80	350
Aluminum-----	15	85	121	15	9	-	21	1	6	33	4	8	71	389
Miscellaneous metals-----	2	14	18	5	1	-	5	-	-	6	5	1	22	79
Total-----	71	280	403	75	32	6	107	4	12	125	23	25	295	1,458

1/ No permanent total injuries reported.

TABLE A-22. - Injuries, distribution, average severity, and injury rates at primary nonferrous smelters, refineries, and reduction plants in the United States, by part of body injured, 1970

Part of body injured	Injuries						Percent- age distrib- ution of all injuries 1/	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Perman- ent partial	Tempo- rary total	All injuries	Fatal	Non- fatal	Fatal	Non- fatal
		Permanent		Tempo- rary total	Total non- fatal									
		Total	Partial											
Head, face, neck (excl. eye)-----	4	-	-	101	101	105	7.6	-	21	249	0.03	0.81	192	17
Eye-----	-	-	1	53	54	54	3.9	900	10	27	-	.43	-	12
Trunk-----	2	-	1	326	327	329	23.7	450	29	67	.02	2.62	96	80
Arm (above wrist)-----	-	-	4	53	57	57	4.1	1,440	35	134	-	.46	-	61
Wrist, hand, fingers-----	-	-	36	227	263	263	18.9	160	24	42	-	2.11	-	89
Leg (above ankle)-----	-	-	8	136	144	144	10.4	1,804	37	135	-	1.15	-	156
Ankle, foot, toes-----	-	-	15	305	320	320	23.1	540	32	56	-	2.57	-	144
Multiple-----	2	-	2	112	114	116	8.4	2,430	42	186	.02	.91	96	77
Unclassified (no data)-----	-	-	-	145	145	145	-	-	30	30	-	1.16	-	35
Total or average-----	8	-	67	1,458	1,525	1,533	-	601	30	86	.06	12.23	385	671

^{1/} Number of injuries for which part of body is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for nonferrous smelters, refineries, and reduction plants is 1,388.

TABLE A-23. - Injuries, distribution, average severity, and injury rates at primary nonferrous smelters, refineries, and reduction plants in the United States, by nature of injury, 1970

Nature of injury	Injuries						Percentage distribution of all injuries ^{1/}	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Non-fatal	Fatal	Non-fatal
		Permanent		Temporary total	Total non-fatal									
		Total	Partial											
Amputation, enucleation-----	1	-	43	-	43	44	3.2	583	-	706	0.01	0.34	48	201
Asphyxiation-----	1	-	-	7	7	8	.6	-	30	776	.01	.06	48	2
Crushing, contusion, bruise-----	4	-	2	298	300	304	21.9	460	18	99	.03	2.41	192	49
Burn, scald (except chemical)-----	1	-	1	235	236	237	17.1	900	28	57	.01	1.89	48	60
Chemical burn-----	-	-	-	33	33	33	2.4	-	24	24	-	.26	-	6
Radiation, radiating substance-----	-	-	-	6	6	6	.4	-	7	7	-	.05	-	(2)
Cut, laceration, puncture-----	-	-	1	115	116	116	8.4	45	18	18	-	.93	-	17
Dermatitis-----	-	-	-	1	1	1	.1	-	4	4	-	.01	-	(2)
Electric shock-----	-	-	-	2	2	2	.1	-	86	86	-	.02	-	1
Foreign body in eye-----	-	-	-	22	22	22	1.6	-	5	5	-	.18	-	1
Fracture-----	1	-	15	239	254	255	18.4	778	58	124	.01	2.04	48	205
Heat exhaustion, sunstroke-----	-	-	-	6	6	6	.4	-	8	8	-	.05	-	(2)
Hernia (inguinal)-----	-	-	-	7	7	7	.5	-	46	46	-	.06	-	3
Poisoning (systemic)-----	-	-	-	16	16	16	1.2	-	22	22	-	.13	-	3
Strain, sprain, dislocation-----	-	-	5	311	316	316	22.8	328	25	30	-	2.53	-	77
Concussion (cerebral)-----	-	-	-	5	5	5	.4	-	157	157	-	.04	-	6
Hernia (except inguinal)-----	-	-	-	2	2	2	.1	-	112	112	-	.02	-	2
Inflammation or irritation of joints, tendons, muscles-----	-	-	-	7	7	7	.5	-	45	45	-	.06	-	3
Other, not elsewhere classified-----	-	-	-	1	1	1	.1	-	5	5	-	.01	-	(2)
Unclassified (no data)-----	-	-	-	145	145	145	-	-	30	30	-	1.16	-	35
Total or average-----	8	-	67	1,458	1,525	1,533	-	601	30	86	.06	12.23	385	671

^{1/} Number of injuries for which nature of injury is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for nonferrous smelters, refineries, and reduction plants is 1,388.

^{2/} Less than 0.5.

TABLE A-24. - Injury experience and worktime data on offeworkers at metal mines and mills in the United States, by mineral industry, 1970

Mineral industry	Injuries			Frequency rates per million man-hours			Severity rates per million man-hours			Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Copper-----	-	3	3	-	0.73	0.73	-	4	4	1,787	289	515,798	4,129,482
Cold-silver-----	-	1	1	-	1.58	1.58	-	3	3	263	300	78,921	630,927
Iron-----	-	6	6	-	1.63	1.63	-	64	64	1,779	257	457,788	3,670,278
Lead-zinc-----	-	3	3	-	1.60	1.60	-	24	24	884	264	233,683	1,871,136
Uranium-----	-	-	-	-	-	-	-	-	-	285	236	67,149	558,969
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	1,399	282	393,899	3,153,559
Total or combined-----	-	13	13	-	.93	.93	-	21	21	6,397	273	1,747,238	14,014,351

TABLE A-25. - Injury experience and worktime data on offeworkers at metal mines and mills in the United States, by State, 1970

State	Injuries			Frequency rates per million man-hours			Severity rates per million man-hours			Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Alabama-----	-	-	-	-	-	-	-	-	-	13	270	3,504	29,229
Alaska-----	-	-	-	-	-	-	-	-	-	10	194	1,940	18,638
Arizona-----	-	2	2	-	0.80	0.80	-	4	4	1,145	273	312,017	2,496,329
Arkansas-----	-	-	-	-	-	-	-	-	-	312	259	80,824	646,597
California-----	-	-	-	-	-	-	-	-	-	75	281	21,040	168,007
Colorado-----	-	2	2	-	1.66	1.66	-	33	33	463	325	150,606	1,203,634
Florida-----	-	-	-	-	-	-	-	-	-	69	251	17,341	138,728
Georgia-----	-	-	-	-	-	-	-	-	-	18	239	4,299	34,389
Idaho-----	-	-	-	-	-	-	-	-	-	137	262	35,925	287,397
Illinois-----	-	-	-	-	-	-	-	-	-	20	273	5,460	43,680
Kentucky-----	-	-	-	-	-	-	-	-	-	2	260	520	4,160
Louisiana-----	-	-	-	-	-	-	-	-	-	204	271	55,268	442,145
Maine-----	-	-	-	-	-	-	-	-	-	13	301	3,913	31,304
Michigan-----	-	-	-	-	-	-	-	-	-	82	254	20,844	169,628
Minnesota-----	-	2	2	-	.77	.77	-	51	51	1,269	254	322,628	2,581,022
Missouri-----	-	4	4	-	3.90	3.90	-	93	93	490	262	128,251	1,026,274
Montana-----	-	1	1	-	4.08	4.08	-	20	20	117	262	30,607	244,856
Nevada-----	-	2	2	-	3.64	3.64	-	26	26	228	297	67,732	548,902
New Jersey-----	-	-	-	-	-	-	-	-	-	35	246	8,601	68,804
New Mexico-----	-	-	-	-	-	-	-	-	-	337	277	93,184	746,171
New York-----	-	-	-	-	-	-	-	-	-	138	273	37,625	301,006
North Carolina-----	-	-	-	-	-	-	-	-	-	16	291	4,659	37,272
Oklahoma-----	-	-	-	-	-	-	-	-	-	4	260	1,040	8,320
Pennsylvania-----	-	-	-	-	-	-	-	-	-	122	261	31,834	254,667
South Dakota-----	-	-	-	-	-	-	-	-	-	155	325	50,356	403,253
Tennessee-----	-	-	-	-	-	-	-	-	-	73	263	19,221	153,773
Texas-----	-	-	-	-	-	-	-	-	-	193	253	48,918	391,345
Utah-----	-	-	-	-	-	-	-	-	-	404	315	127,187	1,017,501
Virginia-----	-	-	-	-	-	-	-	-	-	28	258	7,215	57,717
Washington-----	-	-	-	-	-	-	-	-	-	13	250	3,246	25,965
Wisconsin-----	-	-	-	-	-	-	-	-	-	47	251	11,800	95,227
Wyoming-----	-	-	-	-	-	-	-	-	-	165	240	39,633	338,411
Total or combined-----	-	13	13	-	.93	.93	-	21	21	6,397	273	1,747,238	14,014,351

TABLE A-26. - Injury experience and worktime data on offeworkers at nonferrous smelters, refineries, and reduction plants in the United States, by mineral industry, 1970

Mineral industry	Injuries			Frequency rates per million man-hours			Severity rates per million man-hours			Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Copper-----	-	-	-	-	-	-	-	-	-	1,400	300	419,833	3,307,381
Lead-----	-	-	-	-	-	-	-	-	-	391	258	100,825	806,597
Zinc-----	-	-	-	-	-	-	-	-	-	784	269	210,912	1,686,769
Aluminum-----	-	1	1	-	0.16	0.16	-	1	1	2,869	269	771,712	6,173,700
Miscellaneous metals-----	-	-	-	-	-	-	-	-	-	351	259	90,762	726,337
Total or combined-----	-	1	1	-	.08	.08	-	1	1	5,795	275	1,594,044	12,700,784

APPENDIX B.--1971 DATA

TABLE B-1. - Injury experience by degree and worktime data on metal mines and mills in the United States, by general work location, 1971

General work location	Injuries						Frequency rates per million man-hours			Severity rates per million man-hours			Active operations	Average men working daily	Average days active	Man-days worked	Man-hours worked		
	Fatal	Nonfatal				All injuries	Fatal	Non-fatal	All injuries	Fatal	Non-fatal	All injuries							
		Permanent	Tempo- rary total	Total non- fatal	Total													Non-fatal	All injuries
Underground mines: ----- Underground----- Surface-----	37	2	44	2,485	2,531	2,568	0.90	61.70	62.60	5,412	2,288	7,700	941	19,133	268	5,130,930	41,020,215		
	-	-	7	208	215	215	-	17.14	17.14	-	486	486	-	5,951	263	1,567,252	12,540,598		
	37	2	51	2,693	2,746	2,783	.69	51.27	51.96	4,145	1,866	6,011	941	25,084	267	6,698,182	53,560,813		
	9	-	17	442	459	468	.19	9.58	9.77	1,127	467	1,594	384	19,147	309	5,916,346	47,922,192		
Other surface mining-----	1	-	-	9	9	10	.97	8.75	9.72	5,831	267	6,098	488	958	133	127,529	1,029,006		
Total or average, mining-----	47	2	68	3,144	3,214	3,261	.46	31.35	31.81	2,751	1,196	3,947	1,813	45,189	282	12,742,057	102,512,011		
Mills-----	9	1	35	565	601	610	.18	11.82	12.00	1,062	756	1,818	288	20,173	314	6,341,751	50,833,611		
Grand total or average-----	56	3	103	3,709	3,815	3,871	.37	24.88	25.24	2,191	1,050	3,241	2,101	65,362	292	19,083,808	153,345,622		

TABLE B-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1971

General work location and detailed cause of injury	Injuries						Average severity		
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries
		Permanent		Temporary total	Total non-fatal				
		Total	Partial						
UNDERGROUND MINES									
Underground:									
Falls of roof or back:									
While mining-----	4	-	3	93	96	100	253	44	289
While loading-----	1	-	1	18	19	20	50	29	329
While testing or barring down back-----	3	-	1	30	31	34	113	19	550
While setting or removing timber or other support-----	1	-	-	14	14	15	-	16	415
While preparing or installing rock bolt-----	1	-	-	20	20	21	-	36	320
While moving machinery-----	-	-	-	2	2	2	-	90	90
While using continuous mining machine-----	-	-	-	2	2	2	-	8	8
All other-----	3	-	1	48	49	52	960	19	382
Pressure bumps or bursts-----	-	-	-	5	5	5	-	22	22
Falls of face or side:									
While mining-----	2	-	-	79	79	81	-	37	184
While loading-----	-	-	-	13	13	13	-	23	23
While testing or barring down back-----	-	-	2	65	67	67	210	28	33
While setting or removing timber or other support-----	-	-	1	19	20	20	400	24	43
While preparing or installing rock bolt-----	-	-	-	10	10	10	-	44	44
While moving machinery-----	-	-	-	6	6	6	-	38	38
While moving car-----	-	-	-	1	1	1	-	12	12
All other-----	-	-	-	35	35	35	-	31	31
Inrush of water-----	-	-	-	1	1	1	-	40	40
Sliding or falling material or objects:									
Timber or other support-----	-	-	-	8	8	8	-	15	15
Dropped or thrown by coworker-----	-	-	-	3	3	3	-	18	18
From car, bin, platform, or chute-----	-	-	-	29	29	29	-	12	12
Falling equipment or machinery under repair-----	-	-	-	7	7	7	-	51	51
From stockpile, dump, or gob-----	-	-	-	14	14	14	-	38	38
All other-----	-	-	-	24	24	24	-	30	30
Slips or falls of persons:									
On same level:									
While escaping another hazard-----	-	-	-	18	18	18	-	29	29
While handling material-----	-	-	-	74	74	74	-	21	21
Caused by handtool slipping or breaking-----	-	-	-	4	4	4	-	39	39
While operating or moving machinery-----	-	-	-	40	40	40	-	21	21
All other-----	-	-	-	93	93	93	-	18	18
From an elevation:									
While escaping another hazard-----	-	-	-	4	4	4	-	82	82
While handling material-----	2	-	-	49	49	51	-	31	265
Caused by handtool slipping or breaking-----	-	-	-	3	3	3	-	62	62
While operating or moving machinery-----	-	-	-	28	28	28	-	36	36
Caused by failure of scaffold, ladder, or other support-----	-	-	1	33	34	34	45	29	29
All other-----	2	1	-	63	64	66	-	37	308
Handling material:									
Prop, stull, or timber-----	-	-	3	117	120	120	150	22	25
Ore, valuable mineral-----	2	-	-	12	12	14	-	12	868
Rock or waste-----	-	-	1	98	99	99	150	13	14
Rail-----	-	-	2	28	30	30	85	22	26
Wire or wire rope-----	-	-	-	28	28	28	-	5	5
Rock-bolting material-----	-	-	-	1	1	1	-	101	101
Flying particle while handling material-----	-	-	-	40	40	40	-	5	5
All other-----	-	-	2	191	193	193	180	21	23
Handtools:									
Pick-----	-	-	-	14	14	14	-	9	9
Axe, hatchet, or adz-----	-	-	-	3	3	3	-	3	3
Hammer or sledge-----	-	-	-	10	10	10	-	5	5
Crowbar or bar-----	1	-	-	33	33	34	-	16	192
Saw-----	-	-	-	2	2	2	-	42	42
Handtool used to install rock bolt-----	-	-	-	1	1	1	-	2	2
In hand of fellow worker-----	-	-	-	5	5	5	-	7	7
Flying particle from tool or object worked on-----	-	-	-	12	12	12	-	11	11
All other-----	-	-	-	6	6	6	-	18	18
Stepping or kneeling on sharp or loose objects:									
Stepping on sharp object-----	-	-	-	9	9	9	-	3	3
Stepping on loose object-----	-	-	1	50	51	51	750	35	49
Striking or bumping against objects-----	-	-	-	25	25	25	-	19	19
Haulage:									
Cages, cars, or motors:									
Struck, run over, or squeezed between:									
Coupling or uncoupling-----	-	-	1	15	16	16	50	21	23
Switching, spragging, blocking, or braking-----	-	-	-	4	4	4	-	54	54
Pulling, pushing, or dropping-----	-	-	-	6	6	6	-	14	14
Operating or riding-----	-	-	2	15	17	17	925	24	130
All other-----	-	-	1	18	19	19	75	42	43
Squeezed between cage, car, or motor, and other object:									
Coupling or uncoupling-----	-	-	-	7	7	7	-	21	21
Switching, spragging, blocking, or braking-----	-	-	-	1	1	1	-	10	10
Pulling, pushing, or dropping-----	-	-	1	8	9	9	450	13	62
Operating or riding-----	1	-	1	10	11	12	1,800	66	705
All other-----	-	-	1	22	23	23	300	37	48
Derailment-----	-	-	-	9	9	9	-	37	37
Rerailing-----	-	-	-	30	30	30	-	28	28
Collision (while under control)-----	-	-	-	8	8	8	-	39	39
Runaway (while not under control)-----	-	-	-	1	1	1	-	54	54
Falling, slipping, or jumping into or from-----	-	-	-	31	31	31	-	15	15
Shuttle cars, transloaders, and small mobile trucks:									
Struck or run over-----	-	-	1	5	6	6	540	31	116
Squeezed between shuttle car, transloader, or small mobile truck, and other object-----	-	-	1	3	4	4	50	9	19
All other-----	-	-	-	17	17	17	-	26	26

TABLE B-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1971 - Continued

General work location and detailed cause of injury	Injuries					Average severity			
	Fatal	Nonfatal			All injuries	Permanent partial	Temporary total	All injuries	
		Permanent		Temporary total					Total non-fatal
		Total	Partial						
UNDERGROUND MINES - Continued									
Underground - Continued									
Haulage - Continued									
Automobiles, gasoline or diesel trucks:									
While operating-----	-	-	1	17	18	18	36	38	
Slip or fall on or from-----	-	-	-	7	7	7	21	21	
Miscellaneous haulage:									
Coupling or uncoupling (cars not moving)-----	-	-	-	3	3	3	70	70	
Slip or strain from moving car by hand-----	-	-	-	22	22	22	19	19	
Flying particle-----	-	-	-	7	7	7	7	7	
All other-----	1	-	-	9	9	10	30	627	
Explosives:									
Premature shot or blast-----	1	-	-	2	2	3	70	2,047	
Misfire or digging into unexploded hole-----	-	-	-	7	7	7	50	50	
Flying fragments-----	-	-	-	2	2	2	9	9	
Suffocation from smoke-----	-	-	-	12	12	12	20	20	
Insufficient warning, short fuse, or short cable-----	2	-	-	-	-	2	-	6,000	
All other-----	-	-	-	2	2	2	27	27	
Electricity:									
Trolley wire or pole-----	-	-	-	3	3	3	3	3	
Transformer, generator, or stationary motor-----	-	-	-	2	2	2	18	18	
Power or lighting circuit-----	-	-	-	1	1	1	25	25	
Locomotive or shuttle car-----	-	-	-	1	1	1	2	2	
Cutout switch or junction box-----	1	-	-	4	4	5	8	1,207	
Machinery:									
Belt conveyor-----	-	-	-	1	1	1	10	10	
Chain, bucket, shaker, or screw conveyor-----	-	-	-	2	2	2	16	16	
Mucking machine, mechanical loader-----	-	-	2	35	37	1,545	21	103	
Power drill, rotary or percussive (except rock bolting)-----	-	-	2	148	150	208	16	18	
Power drill for rock bolting-----	-	-	-	5	5	5	13	13	
Power equipment (except drill) for rock bolting-----	-	-	-	5	5	5	27	27	
Power shovel, dragline, bulldozer, etc.-----	1	-	3	53	56	430	22	149	
Stationary machinery-----	-	-	3	13	16	157	31	55	
While moving any machine except mining or loading-----	-	-	-	47	47	-	21	21	
Particle set in motion by machinery (except rock bolting)-----	-	-	1	69	70	1,800	5	31	
Particle set in motion by rock bolting equipment-----	-	-	-	8	8	8	5	5	
Fall of roof, face, or rib caused by machinery (except haulage) knocking out support-----	-	-	-	3	3	3	37	37	
All other-----	-	-	2	10	12	2,100	10	358	
Suffocation (no flame or smoldering):									
Natural mine gas or oxygen deficient-----	3	-	-	7	7	10	4	1,803	
Foreign gas-----	-	-	-	1	1	1	10	10	
Fires or suffocation from fires-----	2	-	-	-	-	2	-	6,000	
Miscellaneous causes:									
Flying particle from draft or wind-----	-	-	-	2	2	2	2	2	
Acetylene or electric welding or cutting-----	-	-	-	2	2	2	6	6	
Irritation or burn from caustic or acid-----	-	-	-	20	20	20	10	10	
Burn from controlled fire-----	-	-	-	11	11	11	31	31	
All other-----	-	-	-	12	12	12	23	23	
Pneumoconiosis-----	-	1	-	1	2	2	44	3,022	
Total or average, excluding shaft and slope-----	34	2	42	2,406	2,450	2,484	502	118	
Shaft and slope:									
Falls of roof or back:									
While mining-----	1	-	-	-	-	1	-	6,000	
While loading-----	-	-	-	1	1	1	2	2	
While testing or barring down back-----	-	-	-	2	2	2	140	140	
All other-----	-	-	-	6	6	6	56	56	
Falls of face or side-----	-	-	-	1	1	1	19	19	
Sliding or falling material or objects:									
Falling cage-----	-	-	-	5	5	5	64	64	
Falling equipment or machinery under repair-----	-	-	-	2	2	2	34	34	
All other-----	-	-	-	3	3	3	20	20	
Slips or falls of persons:									
On same level:									
While operating or moving machinery-----	-	-	1	1	2	2	9	604	
All other-----	-	-	-	3	3	3	43	43	
From an elevation:									
While escaping another hazard-----	-	-	-	1	1	1	3	3	
While handling material-----	1	-	-	3	3	4	95	1,572	
While operating or moving machinery-----	-	-	-	1	1	1	260	260	
Down shaft or slope-----	-	-	1	2	3	3	86	132	
All other-----	-	-	-	6	6	6	37	37	
Handling material:									
Prop, stull, or timber-----	-	-	-	2	2	2	22	22	
All other-----	-	-	-	4	4	4	6	6	
Handtools-----	-	-	-	2	2	2	91	91	
Stepping or kneeling on sharp or loose objects: Stepping on sharp object-----	-	-	-	1	1	1	15	15	
Striking or bumping against objects-----	-	-	-	3	3	3	46	46	
Haulage:									
Cages, cars, or motors:									
Struck, run over, or squeezed between-----	-	-	-	1	1	1	6	6	
Squeezed between cage, car, or motor, and other object:									
Operating or riding-----	1	-	-	1	1	2	31	3,016	
Miscellaneous haulage-----	-	-	-	1	1	1	6	6	
Machinery:									
Mucking machine, mechanical loader-----	-	-	-	3	3	3	14	14	
Power drill, rotary or percussive (except rock bolting)-----	-	-	-	4	4	4	8	8	
While moving any machine except mining or loading-----	-	-	-	2	2	2	14	14	
All other-----	-	-	-	3	3	3	53	53	

TABLE B-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1971 - Continued

General work location and detailed cause of injury	Injuries					Average severity			
	Fatal	Nonfatal			All injuries	Permanent partial	Temporary total	All injuries	
		Permanent		Temporary total					
		Total	Partial						
UNDERGROUND MINES - Continued									
Shaft and slope - Continued									
Miscellaneous causes:									
Irritation or burn from caustic or acid-----	-	-	-	13	13	13	-	15	15
Burn from controlled fire-----	-	-	-	1	1	1	-	1	1
All other-----	-	-	-	1	1	1	-	13	13
Total or average, shaft and slope-----	3	-	2	79	81	84	712	39	268
Total or average, underground-----	37	2	44	2,485	2,531	2,568	511	24	123
Surface at underground:									
Sliding or falling material or objects:									
Dropped or thrown by coworker-----	-	-	-	1	1	1	-	60	60
From car, bin, platform, or chute-----	-	-	-	2	2	2	-	28	28
Falling equipment or machinery under repair-----	-	-	-	3	3	3	-	9	9
From stockpile, dump, or gob-----	-	-	-	1	1	1	-	5	5
All other-----	-	-	-	3	3	3	-	24	24
Slips or falls of persons:									
On same level:									
While escaping another hazard-----	-	-	-	2	2	2	-	22	22
While handling material-----	-	-	-	17	17	17	-	22	22
While operating or moving machinery-----	-	-	-	2	2	2	-	28	28
All other-----	-	-	-	18	18	18	-	28	28
From an elevation:									
While handling material-----	-	-	-	5	5	5	-	41	41
While operating or moving machinery-----	-	-	1	2	3	3	300	5	103
Caused by failure of scaffold, ladder, or other support-----	-	-	-	2	2	2	-	32	32
All other-----	-	-	-	8	8	8	-	31	31
Handling material:									
Prop, stull, or timber-----	-	-	-	12	12	12	-	11	11
Rock or waste-----	-	-	-	1	1	1	-	147	147
Rail-----	-	-	-	2	2	2	-	22	22
Wire or wire rope-----	-	-	-	2	2	2	-	16	16
Flying particle while handling material-----	-	-	-	4	4	4	-	3	3
All other-----	-	-	-	36	36	36	-	27	27
Handtools:									
Crowbar or bar-----	-	-	-	2	2	2	-	2	2
Handtool used to install rock bolt-----	-	-	-	1	1	1	-	2	2
In hand of fellow worker-----	-	-	-	1	1	1	-	2	2
Flying particle from tool or object worked on-----	-	-	-	7	7	7	-	6	6
All other-----	-	-	-	1	1	1	-	4	4
Stepping or kneeling on sharp or loose objects:									
Stepping on loose object-----	-	-	-	7	7	7	-	20	20
While working on hands and knees-----	-	-	-	1	1	1	-	82	82
Striking or bumping against objects-----	-	-	-	4	4	4	-	7	7
Haulage:									
Cages, cars, or motors:									
Struck, run over, or squeezed between:									
Pulling, pushing, or dropping-----	-	-	-	1	1	1	-	6	6
All other-----	-	-	-	3	3	3	-	33	33
Squeezed between cage, car, or motor, and other object:									
Pulling, pushing, or dropping-----	-	-	-	1	1	1	-	3	3
Rerailling-----	-	-	-	1	1	1	-	5	5
Falling, slipping, or jumping into or from-----	-	-	-	5	5	5	-	2	2
Shuttle cars, transloaders, and small mobile trucks-----	-	-	-	5	5	5	-	10	10
Automobiles, gasoline or diesel trucks:									
While operating-----	-	-	1	4	5	5	50	28	33
Slip or fall on or from-----	-	-	-	2	2	2	-	4	4
Miscellaneous haulage-----	-	-	-	2	2	2	-	6	6
Electricity: Cutout switch or junction box-----	-	-	-	2	2	2	-	27	27
Machinery:									
Belt conveyor-----	-	-	-	2	2	2	-	25	25
Power drill, rotary or percussive-----	-	-	-	4	4	4	-	9	9
Power shovel, dragline, bulldozer, etc-----	-	-	-	2	2	2	-	19	19
Stationary machinery-----	-	-	3	3	6	6	485	26	256
While moving any machine except mining or loading-----	-	-	-	1	1	1	-	104	104
Particle set in motion by machinery-----	-	-	-	5	5	5	-	2	2
All other-----	-	-	2	-	2	2	78	-	78
Fires or suffocation from fires: Oil, gasoline, other									
flammable liquid-----	-	-	-	2	2	2	-	4	4
Miscellaneous causes:									
Acetylene or electric welding or cutting-----	-	-	-	8	8	8	-	4	4
Irritation or burn from caustic or acid-----	-	-	-	3	3	3	-	9	9
Burn from controlled fire-----	-	-	-	3	3	3	-	10	10
All other-----	-	-	-	2	2	2	-	8	8
Total or average, surface at underground-----	-	-	7	208	215	215	280	20	28
Total or average, underground mines-----	37	2	51	2,693	2,746	2,783	479	24	116
OPEN PIT MINES									
Falls of face or side:									
While mining-----	-	-	-	4	4	4	-	18	18
While setting or removing timber or other support-----	-	-	-	1	1	1	-	14	14
All other-----	1	-	-	3	3	4	-	116	1,587

TABLE B-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1971 - Continued

General work location and detailed cause of injury	Injuries						Average severity		
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries
		Permanent		Temporary total	Total non-fatal				
		Total	Partial						
OPEN PIT MINES - Continued									
Sliding or falling material or objects:									
Timber or other support-----	-	-	-	1	1	1	-	30	30
From car, bin, platform, or chute-----	-	-	-	1	1	1	-	6	6
Falling equipment or machinery under repair-----	-	-	-	1	1	1	-	26	26
From atockpile, dump, or gob-----	-	-	-	7	7	7	-	36	36
All other-----	-	-	-	2	2	2	-	16	16
Slips or falls of persons:									
On same level:									
While escaping another hazard-----	-	-	-	1	1	1	-	56	56
While handling material-----	-	-	-	26	26	26	-	30	30
While operating or moving machinery-----	-	-	-	14	14	14	-	25	25
All other-----	-	-	-	32	32	32	-	33	33
From an elevation:									
While escaping another hazard-----	-	-	-	4	4	4	-	46	46
While handling material-----	-	-	-	13	13	13	-	37	37
While operating or moving machinery-----	-	-	-	18	18	18	-	43	43
Caused by failure of scaffold, ladder, or other support-----	-	-	-	6	6	6	-	58	58
All other-----	-	-	-	12	12	12	-	20	20
Handling material:									
Prop, stull, or timber-----	-	-	-	12	12	12	-	32	32
Ore, valuable mineral-----	-	-	-	2	2	2	-	6	6
Rock or waste-----	-	-	-	5	5	5	-	16	16
Rail-----	-	-	-	8	8	8	-	35	35
Wire or wire rope-----	-	-	-	5	5	5	-	25	25
Flying particle while handling material-----	-	-	-	6	6	6	-	2	2
All other-----	-	-	4	72	76	76	112	29	34
Handtools:									
Hammer or sledge-----	-	-	-	3	3	3	-	10	10
Crowbar or bar-----	-	-	-	3	3	3	-	39	39
In hand of fellow worker-----	-	-	-	2	2	2	-	7	7
Flying particle from tool or object worked on-----	-	-	-	3	3	3	-	10	10
All other-----	-	-	-	6	6	6	-	40	40
Stepping or kneeling on sharp or loose objects: Stepping on loose object-----	-	-	-	12	12	12	-	14	14
Striking or bumping against objects-----	-	-	-	2	2	2	-	20	20
Haulage:									
Skips, cars, or motors:									
Deraiment-----	-	-	-	1	1	1	-	24	24
Falling, slipping, or jumping into or from-----	-	-	-	3	3	3	-	91	91
Shuttle cars, transloaders, and small mobile trucks:									
Struck or run over-----	-	-	-	1	1	1	-	99	99
All other-----	-	-	-	1	1	1	-	48	48
Railroad cars and locomotives-----	-	-	-	1	1	1	-	207	207
Automobiles, gasoline or diesel trucks:									
While operating-----	6	-	2	45	47	53	485	45	736
Slip or fall on or from-----	-	-	-	19	19	19	-	68	68
Miscellaneous haulage:									
Flying particle-----	-	-	-	1	1	1	-	18	18
All other-----	-	-	-	2	2	2	-	46	46
Explosions of gas or dust: Explosion of gas or dust on surface of deep mine or in strip pit-----	-	-	-	1	1	1	-	120	120
Explosives: Misfire or digging into unexploded hole-----	-	-	-	1	1	1	-	90	90
Electricity: Cutout switch or junction box-----	-	-	-	2	2	2	-	22	22
Machinery:									
Belt conveyor-----	-	-	-	4	4	4	-	43	43
Chain, bucket, shaker, or screw conveyor-----	-	-	-	1	1	1	-	19	19
Mucking machine, mechanical loader-----	-	-	-	7	7	7	-	54	54
Power drill, rotary or percussive-----	-	-	4	8	12	12	684	39	254
Power shovel, dragline, bulldozer, etc-----	1	-	2	28	30	31	400	44	259
Stationary machinery-----	-	-	5	3	8	8	244	86	185
While moving any machine except mining or loading-----	1	-	-	1	1	2	-	243	3,122
Particle set in motion by machinery-----	-	-	-	3	3	3	-	2	2
All other-----	-	-	-	3	3	3	-	25	25
Fires or suffocation from fires: Oil, gasoline, other flammable liquid-----	-	-	-	1	1	1	-	42	42
Miscellaneous causes:									
Acetylene or electric welding or cutting-----	-	-	-	3	3	3	-	57	57
Irritation or burn from caustic or acid-----	-	-	-	3	3	3	-	2	2
Burn from controlled fire-----	-	-	-	11	11	11	-	21	21
All other-----	-	-	-	1	1	1	-	3	3
Total or average, open pit-----	9	-	17	442	459	468	363	37	163
OTHER SURFACE MINING									
Sliding or falling material or objects-----	-	-	-	1	1	1	-	3	3
Slips or falls of persons:									
On same level-----	-	-	-	1	1	1	-	7	7
From an elevation:									
While operating or moving machinery-----	-	-	-	1	1	1	-	13	13
All other-----	-	-	-	1	1	1	-	123	123
Handling material-----	-	-	-	2	2	2	-	5	5
Striking or bumping against objects-----	-	-	-	1	1	1	-	1	1
Haulage:									
Automobiles, gasoline or diesel trucks: While operating-----	1	-	-	1	1	2	-	111	3,056
Fires or suffocation from fires: Oil, gasoline, other flammable liquid-----	-	-	-	1	1	1	-	7	7
Total or average, other surface mining-----	1	-	-	9	9	10	-	31	628
Total or average, mining-----	47	2	68	3,144	3,214	3,261	450	25	124

TABLE B-2. - Number and average severity of injuries by degree at metal mines and mills in the United States, by general work location and detailed cause, 1971 - Continued

General work location and detailed cause of injury	Injuries					Average severity			
	Fatal	Nonfatal				All injuries	Permanent partial	Temporary total	All injuries
		Permanent		Temporary total	Total non-fatal				
		Total	Partial						
MILLS									
Sliding or falling material or objects:									
Dropped or thrown by coworker-----	-	-	-	4	4	4	-	11	11
From car, bin, platform, or chute-----	-	-	-	6	6	6	-	44	44
Falling equipment or machinery under repair-----	-	-	-	2	2	2	-	30	30
All other-----	-	-	-	2	2	2	-	3	3
Slips or falls of persons:									
On same level:									
While escaping another hazard-----	-	-	-	1	1	1	-	136	136
While handling material-----	-	-	-	26	26	26	-	24	24
Caused by handtool slipping or breaking-----	-	-	-	1	1	1	-	60	60
While operating or moving machinery-----	-	1	-	3	4	4	-	60	1,545
All other-----	-	-	-	45	45	45	-	26	26
From an elevation:									
While escaping another hazard-----	-	-	-	2	2	2	-	166	166
While handling material-----	1	-	-	15	15	16	-	58	429
While operating or moving machinery-----	-	-	-	3	3	3	-	155	155
Caused by failure of scaffold, ladder, or other support-----	1	-	-	8	8	9	-	86	743
All other-----	-	-	2	40	42	42	338	28	42
Handling material:									
Prop, stull, or timber-----	-	-	1	18	19	19	45	17	19
Ore, valuable mineral-----	-	-	-	2	2	2	-	128	128
Rock or waste-----	-	-	-	9	9	9	-	53	53
Rail-----	-	-	-	18	18	18	-	22	22
Wire or wire rope-----	-	-	1	2	3	3	1,800	54	636
Flying particle while handling material-----	-	-	-	4	4	4	-	13	13
All other-----	-	-	12	130	142	142	289	36	58
Handtools:									
Hammer or sledge-----	-	-	1	5	6	6	60	8	17
Crowbar or bar-----	-	-	1	10	11	11	75	13	19
Saw-----	-	-	-	1	1	1	-	4	4
Handtool used to install rock bolt-----	-	-	-	6	6	6	-	66	66
In hand of fellow worker-----	-	-	-	1	1	1	-	18	18
Flying particle from tool or object worked on-----	-	-	-	3	3	3	-	18	18
All other-----	-	-	1	9	10	10	50	8	12
Stepping or kneeling on sharp or loose objects: Stepping on loose object-----	-	-	-	18	18	18	-	53	53
Striking or bumping against objects-----	-	-	-	10	10	10	-	35	35
Haulage:									
Cages, cars, or motors:									
Struck, run over, or squeezed between: Operating or riding-----	-	-	-	1	1	1	-	109	109
Squeezed between cage, car, or motor, and other object: Operating or riding-----	-	-	-	1	1	1	-	7	7
Falling, slipping, or jumping into or from-----	-	-	-	1	1	1	-	7	7
Shuttle cars, transloaders, and small mobile trucks:									
Struck or run over-----	-	-	-	1	1	1	-	5	5
Squeezed between shuttle car, transloader, or small mobile truck, and other object-----	-	-	-	2	2	2	-	98	98
All other-----	-	-	-	2	2	2	-	8	8
Railroad cars and locomotives-----	1	-	1	1	2	3	1,500	313	2,604
Automobiles, gasoline or diesel trucks:									
While operating-----	-	-	1	8	9	9	50	27	30
Slip or fall on or from-----	-	-	-	6	6	6	-	25	25
Miscellaneous haulage-----	-	-	1	6	7	7	1,500	58	264
Explosions of gas or dust: Caused by electric arc-----	-	-	-	1	1	1	-	53	53
Electricity-----	-	-	-	1	1	1	-	141	141
Machinery:									
Belt conveyor-----	2	-	2	14	16	18	700	49	783
Chain, bucket, shaker, or screw conveyor-----	-	-	-	2	2	2	-	50	50
Mucking machine, mechanical loader-----	-	-	-	3	3	3	-	36	36
Power drill, rotary or percussive-----	-	-	1	6	7	7	75	22	30
Power shovel, dragline, bulldozer, etc.-----	-	-	2	11	13	13	75	9	19
Stationary machinery-----	1	-	5	15	20	21	374	35	400
While moving any machine except mining or loading-----	-	-	-	2	2	2	-	50	50
Particle set in motion by machinery-----	-	-	1	7	8	8	50	5	11
All other-----	-	-	2	1	3	3	270	1	180
Suffocation (no flame or smoldering): Foreign gas-----	3	-	-	4	4	7	-	46	2,598
Fires or suffocation from fires: Oil, gasoline, other flammable liquid-----	-	-	-	1	1	1	-	11	11
Miscellaneous causes:									
Flying particle from draft or wind-----	-	-	-	3	3	3	-	6	6
Acetylene or electric welding or cutting-----	-	-	-	3	3	3	-	6	6
Irritation or burn from caustic or acid-----	-	-	-	35	35	35	-	21	21
Burn from controlled fire-----	-	-	-	18	18	18	-	14	14
All other-----	-	-	-	5	5	5	-	43	43
Total or average, mills-----	9	1	35	565	601	610	380	34	152
Grand total or average-----	56	3	103	3,709	3,815	3,871	427	27	128

TABLE B-3. - Fatal injuries and distribution by part of body injured at metal mines and mills in the United States, by general work location and detailed cause, 1971

General work location and detailed cause	Injuries										Percentage distribution
	Head, face, neck (excl. eye)	Eye	Trunk	Arm (above wrist)	Wrist, hand, fingers	Leg (above ankle)	Ankle, foot, toes	Multiple	Unclassified (no data)	Total	
UNDERGROUND MINES											
Underground (including shaft and slope):											
Falls of roof or back:											
While mining-----	1	-	-	-	-	-	-	4	-	5	13.51
While loading-----	-	-	1	-	-	-	-	-	-	1	2.70
While testing or barring down back-----	1	-	-	-	-	-	-	2	-	3	8.11
While setting or removing timber or other support-----	-	-	-	-	-	-	-	1	-	1	2.70
While preparing or installing rock bolt-----	-	-	1	-	-	-	-	-	-	1	2.70
All other-----	2	-	-	-	-	-	-	1	-	3	8.11
Falls of face or side: While mining-----	-	-	-	-	-	-	-	2	-	2	5.41
Slips or falls of persons:											
From an elevation:											
While handling material-----	-	-	-	-	-	-	-	3	-	3	8.11
All other-----	1	-	-	-	-	-	-	-	-	2	5.41
Handling material: Ore, valuable mineral-----	2	-	-	-	-	-	-	-	-	2	5.41
Handtools: Crowbar or bar-----	-	-	-	-	-	-	-	1	-	1	2.70
Haulage:											
Cages, cars, or motors:											
Squeezed between cage, car, or motor, and other object:											
Operating or riding-----	-	-	-	-	-	-	-	2	-	2	5.41
All other-----	-	-	1	-	-	-	-	-	-	1	2.70
Explosives:											
Premature shot or blast-----	-	-	-	-	-	-	-	1	-	1	2.70
Insufficient warning, short fuse, or short cable-----	-	-	-	-	-	-	-	2	-	2	5.41
Electricity: Cutout switch or junction box-----	-	-	-	-	-	-	-	1	-	1	2.70
Machinery: Power shovel, dragline, bulldozer, etc.-----	1	-	-	-	-	-	-	-	-	1	2.70
Suffocation (no flame or smoldering): Natural mine gas or oxygen deficient-----	-	-	3	-	-	-	-	-	-	3	8.11
Fires or suffocation from fires-----	-	-	2	-	-	-	-	-	-	2	5.41
Total, underground mines-----	8	-	8	-	-	-	-	21	-	37	-
Percentage distribution-----	21.62	-	21.62	-	-	-	-	56.76	-	-	-
ALL SURFACE MINES											
Falls of face or side-----	-	-	1	-	-	-	-	-	-	1	10.00
Haulage:											
Automobiles, gasoline or diesel trucks: While operating-----	3	-	-	-	-	-	-	4	-	7	70.00
Machinery:											
Power shovel, dragline, bulldozer, etc.-----	1	-	-	-	-	-	-	-	-	1	10.00
While moving any machine except mining or loading-----	1	-	-	-	-	-	-	-	-	1	10.00
Total, surface mines-----	5	-	1	-	-	-	-	4	-	10	-
Percentage distribution-----	50.00	-	10.00	-	-	-	-	40.00	-	-	-
Total, mining-----	13	-	9	-	-	-	-	25	-	47	-
Percentage distribution-----	27.66	-	19.15	-	-	-	-	53.19	-	-	-
MILLS											
Slips or falls of persons:											
From an elevation:											
While handling material-----	-	-	-	-	-	-	-	1	-	1	11.11
Caused by failure of scaffold, ladder, or other support-----	-	-	1	-	-	-	-	-	-	1	11.11
Haulage:											
Railroad cars and locomotives-----	-	-	-	-	-	-	-	1	-	1	11.11
Machinery:											
Belt conveyor-----	-	-	-	-	-	-	-	2	-	2	22.22
Stationary machinery-----	1	-	-	-	-	-	-	-	-	1	11.11
Suffocation (no flame or smoldering): Foreign gas-----	-	-	3	-	-	-	-	-	-	3	33.33
Total, mills-----	1	-	4	-	-	-	-	4	-	9	-
Percentage distribution-----	11.11	-	44.44	-	-	-	-	44.44	-	-	-
Grand total-----	14	-	13	-	-	-	-	29	-	56	-
Percentage distribution-----	25.00	-	23.21	-	-	-	-	51.79	-	-	-

TABLE B-4. - Injuries, distribution, average severity by degree, and injury rates at metal mines and mills in the United States, by general work location and part of body injured, 1971

General work location and part of body injured	Injuries						Percent- age distrib- ution of all injuries 1/	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Perman- ent partial	Tempo- rary total	All injuries	Fatal	Non- fatal	Fatal	Non- fatal
		Permanent		Tempo- rary total	Total non- fatal									
		Total	Partial											
UNDERGROUND MINES														
Underground (including shaft and slope):														
Head, face, neck (excl. eye)-----	8	-	-	159	159	167	6.8	-	14	301	0.20	3.88	1,170	55
Eye-----	-	-	1	148	149	149	6.0	1,800	5	17	-	3.63	-	61
Trunk-----	8	2	6	695	703	711	28.8	906	27	118	.20	17.14	1,170	882
Arm (above wrist)-----	-	-	3	100	103	103	4.2	260	29	35	-	2.51	-	89
Wrist, hand, fingers-----	-	-	27	377	404	404	16.3	189	17	28	-	9.85	-	277
Leg (above ankle)-----	-	-	2	309	311	311	12.6	1,875	31	43	-	7.58	-	326
Ankle, foot, toes-----	-	-	5	455	460	460	18.6	1,122	25	37	-	11.21	-	412
Multiple-----	21	-	-	145	145	166	6.7	-	35	790	.51	3.53	3,071	124
Unclassified (no data)-----	-	-	-	97	97	97	-	-	26	26	-	2.36	-	62
Total or average-----	37	2	44	2,485	2,531	2,568	-	511	24	123	.90	61.70	5,412	2,288
Surface at underground:														
Head, face, neck (excl. eye)-----	-	-	-	12	12	12	5.8	-	6	6	-	.96	-	6
Eye-----	-	-	-	17	17	17	8.2	-	2	2	-	1.36	-	3
Trunk-----	-	-	-	57	57	57	27.4	-	29	29	-	4.55	-	132
Arm (above wrist)-----	-	-	-	9	9	9	4.3	-	29	29	-	.72	-	21
Wrist, hand, fingers-----	-	-	7	29	36	36	17.3	280	14	66	-	2.87	-	189
Leg (above ankle)-----	-	-	-	37	37	37	17.8	-	20	20	-	2.95	-	59
Ankle, foot, toes-----	-	-	-	33	33	33	15.9	-	17	17	-	2.63	-	46
Multiple-----	-	-	-	7	7	7	3.4	-	28	28	-	.56	-	16
Unclassified (no data)-----	-	-	-	7	7	7	-	-	25	25	-	.56	-	14
Total or average-----	-	-	7	208	215	215	-	280	20	28	-	17.14	-	486
Total or average, underground mines-----	37	2	51	2,693	2,746	2,783	-	479	24	116	.69	51.27	4,145	1,866
OPEN PIT MINES														
Head, face, neck (excl. eye)-----	5	-	-	31	31	36	8.0	-	34	863	.10	.65	626	22
Eye-----	-	-	-	18	18	18	4.0	-	5	5	-	.38	-	2
Trunk-----	1	-	1	154	155	156	34.7	900	35	78	.02	3.23	125	130
Arm (above wrist)-----	-	-	-	17	17	17	3.8	-	14	14	-	.35	-	5
Wrist, hand, fingers-----	-	-	14	55	69	69	15.4	152	26	52	-	1.44	-	75
Leg (above ankle)-----	-	-	1	64	65	65	14.5	750	52	63	-	1.36	-	85
Ankle, foot, toes-----	-	-	1	60	61	61	13.6	2,400	42	81	-	1.27	-	103
Multiple-----	3	-	-	24	24	27	6.0	-	60	720	.06	.50	376	30
Unclassified (no data)-----	-	-	-	19	19	19	-	-	38	38	-	.40	-	15
Total or average-----	9	-	17	442	459	468	-	363	37	163	.19	9.58	1,127	467
OTHER SURFACE MINING														
Head, face, neck (excl. eye)-----	-	-	-	1	1	1	11.1	-	3	3	-	.97	-	3
Eye-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trunk-----	-	-	-	2	2	2	22.2	-	6	6	-	1.94	-	13
Arm (above wrist)-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wrist, hand, fingers-----	-	-	-	1	1	1	11.1	-	4	4	-	.97	-	4
Leg (above ankle)-----	-	-	-	1	1	1	11.1	-	123	123	-	.97	-	120
Ankle, foot, toes-----	-	-	-	1	1	1	11.1	-	13	13	-	.97	-	13
Multiple-----	1	-	-	2	2	3	33.3	-	59	2,039	.97	1.94	5,831	115
Unclassified (no data)-----	-	-	-	1	1	1	-	-	1	1	-	.97	-	1
Total or average-----	1	-	-	9	9	10	-	-	31	628	.97	8.75	5,831	267
Total or average, mining-----	47	2	68	3,144	3,214	3,261	-	450	25	124	.46	31.35	2,751	1,196
MILLS														
Head, face, neck (excl. eye)-----	1	-	-	26	26	27	4.7	-	19	241	.02	.51	118	10
Eye-----	-	-	1	38	39	39	6.7	1,800	15	61	-	.77	-	47
Trunk-----	4	1	3	188	192	196	33.8	1,500	41	215	.08	3.78	472	358
Arm (above wrist)-----	-	-	1	21	22	22	3.8	450	54	72	-	.43	-	31
Wrist, hand, fingers-----	-	-	27	91	118	118	20.3	213	23	66	-	2.32	-	154
Leg (above ankle)-----	-	-	1	77	78	78	13.4	225	46	48	-	1.53	-	74
Ankle, foot, toes-----	-	-	2	76	78	78	13.4	290	30	37	-	1.53	-	57
Multiple-----	4	-	-	18	18	22	3.8	-	31	1,117	.08	.35	472	11
Unclassified (no data)-----	-	-	-	30	30	30	-	-	23	23	-	.59	-	14
Total or average, mills-----	9	1	35	565	601	610	-	380	34	152	.18	11.82	1,062	756
Grand total or average-----	56	3	103	3,709	3,815	3,871	-	427	27	128	.37	24.88	2,191	1,050

1/ Number of injuries for which part of body is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for underground is 2,471; for surface 208; for open pit 449; for other surface mining 9; and for mills 580. Distribution percentages may not add to 100.0 because of independent rounding.

TABLE B-5. - Injuries, distribution, average severity by degree, and injury rates at metal mines and mills in the United States, by general work location and nature of injury, 1971

General work location and nature of injury	Injuries						Percent- age distr- bution of all injuries 1/	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Perma- nent partial	Tempo- rary total	All injuries	Fatal	Non- fatal	Fatal	Non- fatal
		Permanent		Tempo- rary total	Total non- fatal									
		Total	Partial											
UNDERGROUND MINES														
Underground (including shaft and slope):														
Amputation, enucleation-----	-	-	29	-	29	29	1.2	444	-	444	-	0.71	-	314
Asphyxiation-----	5	-	-	20	20	25	1.0	-	14	1,211	0.12	.49	731	7
Crushing, contusion, bruise-----	22	1	1	849	851	873	35.3	15	16	174	.54	20.75	3,218	481
Burn, scald (except chemical)-----	-	-	-	20	20	20	.8	-	21	21	-	.49	-	10
Chemical burn-----	-	-	-	28	28	28	1.1	-	13	13	-	.68	-	9
Radiation, radiating substance-----	-	-	-	3	3	3	.1	-	6	6	-	.07	-	(3/)
Cut, laceration, puncture-----	-	-	2	350	352	352	14.2	225	13	15	-	8.58	-	125
Dermatitis-----	-	-	-	3	3	3	.1	-	3	3	-	.07	-	(3/)
Electric shock-----	1	-	-	1	1	2	.1	-	2	3,001	.02	.02	146	(3/)
Foreign body in eye-----	-	-	-	126	126	126	5.1	-	4	4	-	3.07	-	13
Fracture-----	9	-	9	342	351	360	14.6	766	63	229	.22	8.56	1,316	692
Heat exhaustion, sunstroke-----	-	-	-	2	2	2	.1	-	7	7	-	.05	-	(3/)
Hernia (inguinal)-----	-	-	-	20	20	20	.8	-	52	52	-	.49	-	25
Poisoning (systemic)-----	-	-	-	1	1	1	(2/)	-	1	1	-	.02	-	(3/)
Strain, sprain, dislocation-----	-	-	3	600	603	603	24.4	750	22	26	-	14.70	-	378
Silicosis-----	-	1	-	-	1	1	(2/)	-	-	6,000	-	.02	-	146
Pneumoconiosis (except silicosis)-----	-	-	-	1	1	1	(2/)	-	44	44	-	.02	-	1
Concussion (cerebral)-----	-	-	-	7	7	7	.3	-	51	51	-	.17	-	9
Hernia (except inguinal)-----	-	-	-	4	4	4	.2	-	62	62	-	.10	-	6
Freezing, frostbite, etc.-----	-	-	-	1	1	1	(2/)	-	1	1	-	.02	-	(3/)
Inflammation or irritation of joints, tendons, muscles-----	-	-	-	10	10	10	.4	-	35	35	-	.24	-	8
Unclassified (no data)-----	-	-	-	97	97	97	-	-	26	26	-	2.36	-	62
Total or average-----	37	2	44	2,485	2,531	2,568	-	511	24	123	.90	61.70	5,412	2,288
Surface at underground:														
Amputation, enucleation-----	-	-	6	-	6	6	2.9	309	-	309	-	.48	-	148
Crushing, contusion, bruise-----	-	-	-	41	41	41	19.7	-	14	14	-	3.27	-	46
Burn, scald (except chemical)-----	-	-	-	8	8	8	3.8	-	12	12	-	.64	-	8
Chemical burn-----	-	-	-	3	3	3	1.4	-	9	9	-	.24	-	2
Radiation, radiating substance-----	-	-	-	7	7	7	3.4	-	4	4	-	.56	-	2
Cut, laceration, puncture-----	-	-	-	21	21	21	10.1	-	10	10	-	1.67	-	17
Dermatitis-----	-	-	-	2	2	2	1.0	-	8	8	-	.16	-	1
Foreign body in eye-----	-	-	-	10	10	10	4.8	-	3	3	-	.80	-	2
Fracture-----	-	-	1	36	37	37	17.8	105	30	32	-	2.95	-	94
Hernia (inguinal)-----	-	-	-	1	1	1	.5	-	41	41	-	.08	-	3
Poisoning (systemic)-----	-	-	-	1	1	1	.5	-	4	4	-	.08	-	(3/)
Strain, sprain, dislocation-----	-	-	-	70	70	70	33.7	-	25	25	-	5.58	-	141
Inflammation or irritation of joints, tendons, muscles-----	-	-	-	1	1	1	.5	-	82	82	-	.08	-	7
Unclassified (no data)-----	-	-	-	7	7	7	-	-	25	25	-	.56	-	14
Total or average-----	-	-	7	208	215	215	-	280	20	28	-	17.14	-	486
Total or average, underground mines-----	37	2	51	2,693	2,746	2,783	-	479	24	116	.69	51.27	4,145	1,866
OPEN PIT MINES														
Amputation, enucleation-----	-	-	14	-	14	14	3.1	318	-	318	-	.29	-	93
Asphyxiation-----	1	-	-	-	-	1	.2	-	-	6,000	.02	-	125	-
Crushing, contusion, bruise-----	3	-	1	97	98	101	22.5	70	19	198	.06	2.04	376	41
Burn, scald (except chemical)-----	-	-	-	14	14	14	3.1	-	21	21	-	.29	-	6
Chemical burn-----	-	-	-	2	2	2	.4	-	1	1	-	.04	-	(3/)
Radiation, radiating substance-----	-	-	-	4	4	4	.9	-	52	52	-	.08	-	4
Cut, laceration, puncture-----	-	-	-	33	33	33	7.3	-	31	31	-	.69	-	21
Dermatitis-----	-	-	-	1	1	1	.2	-	5	5	-	.02	-	(3/)
Foreign body in eye-----	-	-	-	14	14	14	3.1	-	5	5	-	.29	-	1
Fracture-----	4	-	2	96	98	102	22.7	825	81	328	.08	2.04	501	197
Hernia (inguinal)-----	-	-	-	2	2	2	.4	-	46	46	-	.04	-	2
Poisoning (systemic)-----	-	-	-	1	1	1	.2	-	3	3	-	.02	-	(3/)
Strain, sprain, dislocation-----	-	-	-	159	159	159	35.4	-	26	26	-	3.32	-	86
Concussion (cerebral)-----	1	-	-	-	-	1	.2	-	-	6,000	.02	-	125	-
Unclassified (no data)-----	-	-	-	19	19	19	-	-	38	38	-	.40	-	15
Total or average-----	9	-	17	442	459	468	-	363	37	163	.19	9.58	1,127	467

1/ Number of injuries for which nature of injury is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for underground is 2,471; for surface 208; for open pit 449; for other surface mining 9; and for mills 580. Distribution percentages may not add to 100.0 because of independent rounding.

2/ Less than 0.05.

3/ Less than 0.5.

TABLE B-5. - Injuries, distribution, average severity by degree, and injury rates at metal mines and mills in the United States, by general work location and nature of injury, 1971 - Continued

General work location and nature of injury	Injuries						Percentage distribution of all injuries 1/	Average severity			Frequency rates per million man-hours		Severity rates per million man-hours	
	Fatal	Nonfatal				All injuries		Perma- nent partial	Tempo- rary total	All injuries	Fatal	Non- fatal	Fatal	Non- fatal
		Permanent		Tempo- rary total	Total non- fatal									
		Total	Partial											
OTHER SURFACE MINING														
Crushing, contusion, bruise-----	1	-	-	2	2	3	33.3	-	8	2,005	0.97	1.94	5,831	16
Burn, scald (except chemical)-----	-	-	-	1	1	1	11.1	-	7	7	-	.97	-	7
Cut, laceration, puncture-----	-	-	-	1	1	1	11.1	-	4	4	-	.97	-	4
Fracture-----	-	-	-	1	1	1	11.1	-	111	111	-	.97	-	108
Strain, sprain, dislocation-----	-	-	-	3	3	3	33.3	-	45	45	-	2.92	-	132
Unclassified (no data)-----	-	-	-	1	1	1	-	-	1	1	-	.97	-	1
Total or average-----	1	-	-	9	9	10	-	-	31	628	.97	8.75	5,831	267
Total or average, mining-----	47	2	68	3,144	3,214	3,261	-	450	25	124	.46	31.35	2,751	1,196
MILLS														
Amputation, enucleation-----	-	-	21	-	21	21	3.6	189	-	189	-	.41	-	78
Asphyxiation-----	3	-	-	4	4	7	1.2	-	46	2,598	.06	.08	354	4
Crushing, contusion, bruise-----	2	-	2	116	118	120	20.7	295	14	118	.04	2.32	236	43
Burn, scald (except chemical)-----	-	-	-	18	18	18	3.1	-	16	16	-	.35	-	6
Chemical burn-----	-	-	-	34	34	34	5.9	-	20	20	-	.67	-	13
Radiation, radiating substance-----	-	-	-	3	3	3	.5	-	6	6	-	.06	-	(3/)
Cut, laceration, puncture-----	-	-	1	49	50	50	8.6	150	18	20	-	.98	-	20
Foreign body in eye-----	-	-	1	14	15	15	2.6	1,800	11	130	-	.30	-	38
Fracture-----	4	-	6	89	95	99	17.1	346	76	332	.08	1.87	472	174
Hernia (inguinal)-----	-	-	-	7	7	7	1.2	-	44	44	-	.14	-	6
Poisoning (systemic)-----	-	-	-	1	1	1	.2	-	33	33	-	.02	-	1
Strain, sprain, dislocation-----	-	1	4	194	199	199	34.3	1,181	36	89	-	3.91	-	350
Hernia (except inguinal)-----	-	-	-	4	4	4	.7	-	101	101	-	.08	-	8
Freezing, frostbite, etc.-----	-	-	-	1	1	1	.2	-	76	76	-	.02	-	1
Inflammation or irritation of joints, tendons, muscles-----	-	-	-	1	1	1	.2	-	4	4	-	.02	-	(3/)
Unclassified (no data)-----	-	-	-	30	30	30	-	-	23	23	-	.59	-	14
Total or average, mills-----	9	1	35	565	601	610	-	380	34	152	.18	11.82	1,062	756
Grand total or average-----	56	3	103	3,709	3,815	3,871	-	427	27	128	.37	24.88	2,191	1,050

^{1/} Number of injuries for which nature of injury is "Unclassified" is excluded in calculating percentages. Therefore, 100 percent for underground is 2,471; for surface 208; for open pit 449; for other surface mining 9; and for mills 580. Distribution percentages may not add to 100.0 because of independent rounding.

^{2/} Less than 0.05.

^{3/} Less than 0.5.

TABLE B-6. - Injury experience and worktime data on metal mines and mills in the United States, by general work location and employment size group, 1971

General work location and employment size group	Injuries		Frequency rates per million man-hours			Severity rates per million man-hours			Active operations	Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Underground mines (includes surface work):													
1-4-----	3	101	104	2.14	72.15	74.29	12,858	1,679	14,538	642	1,384	127	1,399,881
5-9-----	2	58	60	1.69	49.06	50.75	10,150	1,150	11,300	132	734	200	1,182,298
10-19-----	-	89	89	-	74.80	74.80	-	1,822	1,822	46	656	226	1,189,826
20-34-----	1	38	39	1.42	53.78	55.19	8,491	1,043	9,534	13	347	255	706,598
35-49-----	1	102	103	.70	70.92	71.62	4,172	1,902	6,074	18	727	247	1,438,164
50-99-----	3	314	317	.63	65.62	66.24	3,761	4,634	8,395	30	2,206	271	1,478,368
100-149-----	8	152	160	1.57	29.85	31.42	9,426	1,026	10,452	21	2,466	258	5,092,303
150-249-----	7	599	606	.97	83.30	84.27	5,841	1,784	7,625	17	3,366	267	7,190,819
250 or more-----	12	1,280	1,292	.41	43.83	44.24	2,466	1,719	4,185	22	12,432	294	29,202,266
Unassigned 1-----	-	13	13	-	9.47	9.47	-	1,112	1,112	-	766	224	1,373,290
Total or average-----	37	2,746	2,783	.69	51.27	51.96	4,145	1,866	6,011	941	25,084	267	53,560,813
Open pit mines:													
1-4-----	1	16	17	2.65	42.37	45.02	15,888	1,801	17,689	232	410	114	377,632
5-9-----	1	3	4	2.17	6.50	8.67	13,004	147	13,152	32	242	231	55,980
10-19-----	-	32	32	-	38.87	38.87	-	680	680	26	389	234	461,389
20-34-----	1	17	18	.98	16.59	17.57	5,856	735	6,429	17	466	260	823,358
35-49-----	-	17	17	-	23.54	23.54	-	176	176	7	304	263	1,024,533
50-99-----	2	57	59	.51	14.64	15.16	3,082	735	3,818	26	1,830	253	722,262
100-149-----	-	37	37	-	10.44	10.44	-	567	567	13	1,655	268	3,893,085
150-249-----	1	47	48	.20	9.36	9.54	1,492	498	1,691	9	1,756	347	3,543,577
250 or more-----	3	229	232	.10	7.51	7.61	591	419	1,010	22	11,490	332	5,031,901
Unassigned 2-----	-	4	4	-	2.56	2.56	-	126	126	-	605	323	3,810,019
Total or average-----	9	459	468	.19	9.58	9.77	1,127	467	1,594	384	19,147	309	1,564,284
Other surface mining:													
1-4-----	-	-	-	-	-	-	-	-	-	-	-	-	-
5-9-----	1	1	2	11.78	11.78	23.56	70,689	82	70,771	467	580	55	252,149
10-19-----	-	4	4	-	25.31	25.31	-	785	785	12	79	135	84,879
20-34-----	-	1	1	-	24.73	24.73	-	25	25	4	73	251	158,030
35-49-----	-	3	3	-	42.23	42.23	-	2,013	2,013	1	41	123	40,431
50-99-----	-	-	-	-	-	-	-	-	-	2	40	222	71,040
Total or average-----	1	9	10	.97	8.75	9.72	5,831	267	6,098	488	958	133	1,029,006
Total or average, mining-----	47	3,214	3,261	.46	31.35	31.81	2,751	1,196	3,947	1,813	45,189	282	102,512,011
Mills:													
1-4-----	-	8	8	-	47.13	47.13	-	766	766	73	164	129	169,750
5-9-----	-	15	15	-	41.38	41.38	-	784	784	35	206	216	362,458
10-19-----	-	26	26	-	23.94	23.94	-	366	366	36	512	259	1,086,036
20-34-----	1	68	69	.45	30.76	31.21	2,714	2,115	4,829	39	992	278	2,210,802
35-49-----	-	31	31	-	17.59	17.59	-	383	383	19	780	278	1,762,212
50-99-----	5	95	100	.79	14.95	15.74	4,721	5,289	5,289	37	2,634	300	6,355,224
100-149-----	1	37	38	.28	10.37	10.65	1,682	295	1,977	12	1,450	308	789,667
150-249-----	1	109	109	.08	11.14	11.14	4,701	1,704	1,704	19	3,802	322	3,567,271
250 or more-----	2	212	214	.08	8.30	8.38	470	428	898	18	9,633	331	9,786,415
Total or average, mills-----	9	601	610	.18	11.82	12.00	1,062	756	1,818	288	20,173	314	25,533,443
Total or average-----	56	3,815	3,871	.37	24.88	25.24	2,191	1,050	3,241	2,101	65,362	292	50,833,611
Grand total or average-----													153,345,622

1/ Data on 7 surface installations that cannot be assigned to individual mines.

2/ Data on 3 installations that cannot be assigned to individual mines.

TABLE B-7. - Injuries by degree at metal mines and mills in the United States, by State ^{1/}, 1971

Injuries											
State	At mine					At mill					
	Fatal	Nonfatal			All injuries	Fatal	Nonfatal			All injuries	
		Permanent		Tempo- rary total			Permanent		Tempo- rary total		
		Total	Partial				Total	Partial			
Alabama-----	-	-	-	2	2	-	-	-	6	6	6
Alaska-----	-	-	17	17	17	-	-	-	-	-	-
Arizona-----	8	8	670	678	686	3	-	5	124	129	132
Arkansas-----	-	1	5	6	6	-	-	2	34	36	36
California-----	5	2	93	95	100	1	-	-	28	28	29
Colorado-----	3	12	382	395	398	-	2	2	14	16	16
Georgia-----	-	7	7	7	7	-	-	-	-	-	-
Idaho-----	6	7	343	350	356	-	-	1	1	2	2
Illinois-----	-	-	2	2	2	-	-	-	2	2	2
Kentucky-----	-	-	8	8	8	-	-	-	-	-	-
Louisiana-----	-	-	-	-	-	-	-	1	21	22	22
Maine-----	-	-	5	5	5	-	-	-	1	1	1
Michigan-----	-	6	171	177	177	-	1	2	71	74	74
Minnesota-----	-	3	52	55	55	-	-	6	31	37	37
Missouri-----	5	3	234	237	242	1	-	1	22	23	24
Montana-----	1	2	102	104	105	-	-	-	28	28	28
Nevada-----	1	1	46	47	48	1	-	1	24	25	26
New Jersey-----	1	-	25	25	26	-	-	-	2	2	2
New Mexico-----	3	4	333	337	340	-	-	2	46	48	48
New York-----	1	-	61	61	62	-	-	1	12	13	13
North Carolina-----	-	1	27	28	28	-	-	1	1	2	2
Oklahoma-----	-	-	12	12	12	-	-	-	2	2	2
Oregon-----	-	1	-	1	1	-	-	-	-	-	-
Pennsylvania-----	2	2	30	32	34	-	-	-	1	1	1
South Dakota-----	1	1	86	87	88	-	-	-	4	4	4
Tennessee-----	4	1	84	85	89	1	-	-	8	12	13
Texas-----	-	1	3	4	4	-	-	3	33	36	36
Utah-----	3	9	178	187	190	1	-	2	21	23	24
Virginia-----	-	-	38	38	38	1	-	-	2	2	3
Washington-----	-	1	28	29	29	-	-	1	5	6	6
Wisconsin-----	-	-	6	6	6	-	-	-	6	6	6
Wyoming-----	3	3	94	97	100	-	-	-	15	15	15
Total-----	47	2	68	3,144	3,261	9	1	35	565	601	610

^{1/} No injuries were reported at metal mines and mills for States not listed.

TABLE B-8. - Fatal injuries by general work location and main cause at metal mines and mills in the United States, by State 1/1, 1971

State	Underground mines														Open pit mines				Other surface mining		Mills					Grand total				
	Underground														Shaft and slope															
	Falls of roof or back	Falls of face or side	Slips or falls of persons	Handling material	Handtools	Haulage	Explosives	Electricity	Machinery	Suffocation (no flame or smoldering)	Fires or suffocation from fires	Total, underground	Falls of roof or back	Slips or falls of persons	Haulage	Total, shaft and slope	Total, underground plus total, shaft and slope	Falls of face or side	Haulage	Machinery	Total, open pit	Haulage	Total, other surface	Total, mining activities	Slips or falls of persons		Haulage	Suffocation (no flame or smoldering)	Total, mills	
Arizona-----	1	1	1	1	1	1	2	1	1	1	1	4	1	1	1	1	5	2	1	1	3	1	1	8	1	1	3	3	11	
California-----	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	4	1	1	1	1	1	1	5	1	1	1	1	6	
Colorado-----	1	1	1	1	1	1	1	1	1	1	2	5	1	1	1	1	2	1	1	1	1	1	1	3	1	1	1	1	9	
Idaho-----	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	1	1	1	1	6	
Missouri-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Montana-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nevada-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New Jersey-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New Mexico-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New York-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Pennsylvania-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
South Dakota-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tennessee-----	2	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	4	1	1	1	1	1	1	4	1	1	1	1	1	
Utah-----	2	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	3	1	1	1	1	1	1	3	1	1	1	1	1	
Virginia-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Wyoming-----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total-----	13	2	4	2	1	2	3	1	1	3	2	34	1	1	1	3	37	1	6	2	9	1	1	47	2	1	3	3	9	56

1/ No fatal injuries were reported at metal mines and mills for work locations or States not listed.

TABLE B-9. - Nonfatal injuries by general work location and main cause at metal mines and mills in the United States, by State 1/ , 1971

State	Underground mines																															
	Underground														Shaft and slope																	
	Falls of roof or back	Pressure bumps or bursts	Falls of face or side	Inrush of water	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Suffocation (no flame or smoldering)	Miscellaneous causes	Pneumoconiosis	Total, underground	Falls of roof or back	Falls of face or side	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Machinery	Miscellaneous causes	Total, shaft and slope	Total, underground plus total, shaft and slope	
Alabama-----	1	-	1	-	-	3	2	-	-	1	1	-	-	2	-	-	2	-	12	-	-	-	-	-	-	-	-	-	-	-	-	12
Alaska-----	14	-	68	-	21	53	114	21	10	5	56	-	3	49	-	8	-	422	-	8	1	14	6	2	1	3	-	12	15	66	488	
Arizona-----	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3	
Arkansas-----	8	-	-	-	2	10	14	3	1	1	11	-	-	10	-	-	-	61	-	-	-	-	-	-	-	-	-	-	-	-	61	
California-----	36	-	15	-	10	57	85	9	8	1	48	7	6	72	-	9	1	364	-	9	3	3	-	-	-	-	-	-	-	-	367	
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Georgia-----	68	5	11	-	13	42	71	10	6	4	36	1	-	65	-	8	-	340	-	-	3	-	-	-	-	-	-	-	-	-	343	
Idaho-----	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2	
Illinois-----	-	-	1	-	-	1	1	1	1	-	2	-	-	-	-	1	-	7	-	-	-	-	-	-	-	-	-	-	-	-	7	
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	136	-	6	-	-	-	-	-	-	-	-	-	-	136	
Kentucky-----	15	-	29	-	3	21	20	4	4	7	12	2	1	12	-	6	-	191	-	-	-	-	-	-	-	-	-	-	-	-	191	
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Maine-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Michigan-----	3	-	17	-	5	59	32	8	15	3	21	2	-	23	1	2	-	45	-	2	-	-	-	-	-	-	-	-	-	-	47	
Minnesota-----	7	-	6	-	-	8	10	2	1	-	5	-	-	6	-	-	-	19	-	2	-	-	-	-	-	-	-	-	-	-	19	
Missouri-----	1	-	4	-	4	4	4	1	-	-	4	-	-	2	-	-	-	45	-	2	-	-	-	-	-	-	-	-	-	-	23	
Montana-----	1	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	23	-	-	-	-	-	-	-	-	-	-	-	-	273	
Nevada-----	1	-	47	-	11	39	59	13	2	2	24	3	-	51	7	4	-	272	-	-	-	1	-	-	-	-	-	-	-	-	2	
New Jersey-----	10	-	2	-	2	13	10	2	-	-	4	-	-	13	-	-	1	53	-	-	-	-	-	-	-	-	-	-	-	-	55	
New Mexico-----	6	-	3	-	-	2	8	1	-	-	4	-	-	5	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	24	
New York-----	2	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	6	
North Carolina-----	2	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Oklahoma-----	2	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Oregon-----	4	-	2	-	-	12	4	-	-	-	1	1	-	2	-	1	-	28	-	-	-	-	-	-	-	-	-	-	-	-	29	
Pennsylvania-----	6	-	4	-	2	23	7	4	-	1	10	1	-	20	-	2	-	79	-	-	-	-	-	-	-	-	-	-	-	-	79	
South Dakota-----	11	-	4	-	2	17	13	2	4	-	14	4	-	15	-	2	-	84	-	-	1	-	-	-	-	-	-	-	-	-	85	
Tennessee-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Texas-----	28	-	10	1	5	21	39	2	3	1	16	1	1	37	-	2	-	166	-	-	-	1	-	-	-	-	-	-	-	-	168	
Utah-----	1	-	-	-	1	7	7	1	1	1	3	1	-	6	-	-	1	31	-	-	-	-	-	-	-	-	-	-	-	-	31	
Virginia-----	4	-	-	-	1	1	6	-	-	-	5	2	-	4	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	25	
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	
Wisconsin-----	-	-	9	-	-	8	9	1	2	-	6	-	-	10	-	-	-	49	-	-	-	-	-	-	-	-	-	-	-	-	49	
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total-----	233	5	231	1	85	411	523	86	60	25	285	25	11	412	8	47	2	2,450	-	9	1	10	19	6	2	1	3	3	12	15	81	2,531

1/ No nonfatal injuries were reported at metal mines and mills for States not shown.

TABLE B-9. - Nonfatal injuries by general work location and main cause at metal mines and mills in the United States, by State 1/1, 1971 - Continued

State	Underground mines - continued											Open pit mines																
	Surface											Total, underground mines																
	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Electricity	Machinery	Fires or suffocation from fires	Miscellaneous causes	Total, surface	Falls of face or side	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or dust	Explosives	Electricity	Machinery	Fires or suffocation from fires	Miscellaneous causes	Total, open pit	
Alabama-----	-	-	-	-	-	-	-	-	1	1	-	1	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alaska-----	1	10	13	1	2	2	7	1	6	1	6	50	538	2	5	41	45	1	4	1	22	-	-	-	18	-	1	140
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Arkansas-----	-	3	1	1	1	-	1	-	-	-	-	7	68	3	-	4	3	3	1	6	-	1	-	5	-	1	27	
California-----	-	-	-	-	-	-	-	-	-	-	-	-	395	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado-----	2	6	8	1	1	-	4	1	3	-	2	28	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	-	348	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Idaho-----	-	3	-	-	-	-	-	-	-	-	-	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Kentucky-----	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine-----	-	3	3	-	-	-	1	-	2	-	-	10	5	-	-	7	5	-	3	-	4	1	-	2	-	7	30	
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	237	-	-	17	10	4	-	-	14	-	-	9	-	1	55	
Minnesota-----	2	16	7	4	3	1	6	-	3	-	4	46	54	-	-	14	10	5	2	-	10	-	-	5	-	3	50	
Missouri-----	1	-	4	-	-	-	1	-	1	-	-	7	22	-	1	4	6	1	1	-	9	-	-	2	-	1	25	
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	23	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
Nevada-----	-	4	4	2	-	-	1	-	3	-	-	14	287	1	2	13	13	1	-	3	-	-	-	14	-	1	50	
New Jersey-----	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
New Mexico-----	-	1	4	-	-	-	-	-	-	-	-	4	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
New York-----	-	1	1	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
North Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Oregon-----	-	2	2	-	1	-	2	-	-	-	-	8	31	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Pennsylvania-----	1	-	-	-	-	-	-	-	-	-	-	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
South Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas-----	-	-	-	-	-	-	-	-	-	-	-	-	174	-	-	2	4	1	-	5	-	-	-	-	-	-	-	13
Utah-----	-	2	1	2	-	-	1	-	-	-	-	6	38	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Virginia-----	-	1	1	1	-	-	1	-	-	-	-	7	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	1	1	1	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	-	-	55	-	-	15	8	1	-	-	-	-	-	-	-	-	-	2
Wyoming-----	-	1	3	-	-	-	-	-	1	-	1	6	4	-	2	-	-	-	-	-	1	-	-	1	10	-	3	42
Total-----	10	57	57	12	8	4	25	2	22	2	16	215	2,746	8	12	126	114	17	12	2	76	1	1	2	69	1	18	459

1/ No nonfatal injuries were reported at metal mines and mills for States not shown.

TABLE B-9. - Nonfatal injuries by general work location and main cause at metal mines and mills in the United States, by State 1/1, 1971 - Continued

State	Other surface mining						Total, mining activities	Mills												Grand total			
	Sliding or falling material or objects	Slips or falls of persons	Handling material	Striking or bumping against objects	Haulage	Fires or suffocation from fires		Total, other surface mining	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or dust	Electricity	Machinery	Suffocation (no flame or smoldering)		Fires or suffocation from fires	Miscellaneous causes	Total, mills
Alabama-----	1	3	1	-	1	-	2	-	-	-	1	-	-	-	-	-	-	1	-	-	4	6	8
Alaska-----	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Arizona-----	-	-	-	-	-	-	678	-	34	49	5	3	3	3	6	-	-	19	3	-	7	129	807
Arkansas-----	-	-	-	-	-	-	6	-	7	18	2	1	1	4	4	-	-	3	-	-	5	36	42
California-----	-	-	-	-	-	-	95	-	2	5	2	2	1	1	5	-	-	2	-	-	4	28	123
Colorado-----	-	-	-	-	-	-	395	-	7	9	-	1	1	-	-	-	-	1	1	-	2	16	411
Georgia-----	-	-	-	1	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Idaho-----	-	-	-	-	-	-	350	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	352
Illinois-----	-	-	-	-	-	-	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	4	2
Indiana-----	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Kentucky-----	-	-	-	-	-	-	-	-	8	3	2	1	-	-	1	-	-	-	-	-	7	22	22
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Maine-----	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Michigan-----	1	-	-	-	-	-	177	5	23	14	7	3	3	2	1	-	12	1	-	-	7	74	251
Minnesota-----	-	-	-	-	-	-	55	-	12	13	1	1	1	1	1	-	5	-	1	1	2	37	92
Missouri-----	-	-	-	-	-	-	237	1	8	6	3	-	1	1	2	-	2	-	-	-	4	23	260
Montana-----	-	-	-	-	-	-	104	1	6	11	3	-	-	-	-	-	6	-	-	-	4	28	132
Nevada-----	-	-	-	-	-	-	47	-	5	9	-	-	-	1	1	-	-	9	-	-	3	25	72
New Jersey-----	-	-	-	-	-	-	25	-	1	14	4	-	-	-	-	-	11	-	-	-	-	2	35
New Mexico-----	-	-	-	-	-	-	337	-	15	6	-	-	-	-	-	-	-	-	-	-	1	48	375
New York-----	-	-	-	-	-	-	61	-	2	6	-	-	-	-	3	-	-	-	-	-	1	13	74
North Carolina-----	-	-	-	-	-	-	28	-	1	-	-	-	-	-	1	-	2	-	-	-	-	2	30
Oklahoma-----	-	-	-	-	-	-	12	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	14
Oregon-----	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Pennsylvania-----	-	-	-	-	-	-	32	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	33
South Dakota-----	-	-	-	-	-	-	87	-	1	1	-	1	-	-	-	-	-	-	-	-	1	4	91
Tennessee-----	-	-	-	-	-	-	85	-	3	5	-	-	-	-	3	-	1	-	-	-	11	12	97
Texas-----	-	-	-	-	-	-	187	2	4	12	3	3	1	-	-	-	2	-	-	-	2	36	210
Utah-----	-	-	-	-	-	-	38	-	6	8	2	1	-	-	-	-	-	-	-	-	-	2	40
Virginia-----	-	-	-	-	-	-	29	-	2	-	-	-	-	-	1	-	1	-	-	-	-	6	55
Washington-----	-	-	-	-	-	-	6	-	1	3	-	-	-	-	1	-	-	-	-	-	1	6	12
Wisconsin-----	-	-	-	-	-	-	97	2	3	7	1	1	-	-	-	-	1	-	-	-	-	15	112
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----	1	3	2	1	1	1	9	3,214	14	147	197	38	18	10	32	1	1	74	4	1	64	601	3,815

1/ No nonfatal injuries were reported at metal mines and mills for States not shown.

TABLE 8-10. - Injuries by general work location and main cause at metal mines and mills in the United States, by degree of injury and mineral industry, 1971

[illegible]

TABLE B-10. - Injuries by general work location and main cause at metal mines and mills in the United States, by degree of injury and mineral industry, 1971 - Continued

Degree of injury and mineral industry	Other surface mining						Total, mining activities	Mills													Grand total		
	Sliding or falling material or objects	Slips or falls of persons	Handling material	Striking or bumping against objects	Haulage	Fires or suffocation from fires		Total, other surface mining	Sliding or falling material or objects	Slips or falls of persons	Handling material	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or dust	Electricity	Machinery	Suffocation (no flame or smoldering)	Fires or suffocation from fires		Miscellaneous causes	Total, mills
Fatal and nonfatal:																							
Copper-----	1	3	1	1	1	1	2	1,081	1	63	77	11	4	4	8	-	-	33	6	-	10	217	1,298
Gold-silver-----	1	1	1	1	1	-	4	342	5	2	5	1	7	5	7	-	-	24	-	1	4	14	356
Iron-----	1	1	1	1	1	-	4	433	8	42	35	12	7	5	7	-	-	24	-	1	13	151	584
Lead-zinc-----	1	1	1	1	1	-	-	255	3	9	25	3	1	1	8	-	1	4	-	-	6	61	972
Uranium-----	1	1	1	1	1	-	-	239	2	10	13	3	1	-	10	1	-	10	1	-	29	131	370
Miscellaneous metals-----	1	3	2	1	2	1	10	3,261	14	149	197	38	18	10	33	1	1	77	7	1	64	610	3,871
Total-----																							
Fatal:																							
Copper-----	1	1	1	1	1	-	1	12	-	-	-	-	-	-	1	-	-	2	3	-	-	6	18
Gold-silver-----	1	1	1	1	1	-	-	3	-	-	-	-	-	-	-	-	-	1	-	-	-	2	5
Iron-----	1	1	1	1	1	-	-	18	-	1	-	-	-	-	-	-	-	1	-	-	-	1	19
Lead-zinc-----	1	1	1	1	1	-	-	5	-	1	-	-	-	-	-	-	-	5	-	-	-	5	5
Uranium-----	1	1	1	1	1	-	-	4	-	-	-	-	-	-	-	-	-	4	-	-	-	4	4
Miscellaneous metals-----	1	1	1	1	1	-	-	47	-	2	-	-	-	-	1	-	-	3	3	-	-	9	56
Total-----																							
Permanent total:																							
Copper-----	1	1	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-silver-----	1	1	1	1	1	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron-----	1	1	1	1	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1
Lead-zinc-----	1	1	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Uranium-----	1	1	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous metals-----	1	1	1	1	1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total-----																							
Permanent partial:																							
Copper-----	1	1	1	1	1	-	-	15	-	1	4	1	-	-	-	-	-	3	-	-	-	9	24
Gold-silver-----	1	1	1	1	1	-	-	6	-	1	-	-	-	-	1	-	-	5	-	-	-	10	22
Iron-----	1	1	1	1	1	-	-	12	-	1	3	1	-	-	2	-	-	5	-	-	-	6	22
Lead-zinc-----	1	1	1	1	1	-	-	18	-	1	1	-	-	-	1	-	-	2	-	-	-	2	24
Uranium-----	1	1	1	1	1	-	-	8	-	-	1	-	-	-	1	-	-	1	-	-	-	2	10
Miscellaneous metals-----	1	1	1	1	1	-	-	9	-	-	5	1	-	-	-	-	-	2	-	-	-	8	17
Total-----																							
Temporary total:																							
Copper-----	1	3	1	1	1	1	1	1,054	1	62	73	10	4	4	7	-	-	28	3	-	10	202	1,256
Gold-silver-----	1	1	1	1	1	-	4	331	-	2	5	1	1	1	6	-	-	1	1	-	4	14	345
Iron-----	1	1	1	1	1	-	4	418	5	40	32	11	7	5	6	-	-	18	-	1	13	138	556
Lead-zinc-----	1	1	1	1	1	-	-	874	3	7	24	4	1	1	3	-	-	3	-	-	6	54	928
Uranium-----	1	1	1	1	1	-	-	261	3	10	12	3	1	1	3	-	-	3	-	-	2	34	275
Miscellaneous metals-----	1	1	1	1	1	-	-	226	2	23	37	6	6	1	10	1	-	8	1	-	29	123	349
Total-----																							
Total-----	1	3	2	1	1	1	9	3,144	14	144	183	35	18	10	29	1	1	61	4	1	64	565	3,709

TABLE B-11. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by mineral industry, 1971

Mineral industry	Fatal					Nonfatal										
	Underground mines			Open pit mines	Grand total	Underground mines			Open pit mines	Grand total						
	Underground	Surface				Total mining activities	Mills	Underground			Surface	Total				
		Total	Other surface mining													
				Injuries												
Frequency rates per million man-hours																
Copper-----	7	-	7	4	1	12	6	18	762	67	829	239	1	1,069	211	1,280
Gold-silver-----	4	-	4	1	-	5	-	5	304	17	321	12	4	337	14	351
Iron-----	2	-	2	1	-	3	2	5	249	47	296	130	4	430	149	579
Lead-zinc-----	18	-	18	-	-	18	1	19	846	47	893	-	-	893	60	953
Uranium-----	2	-	2	3	-	5	-	5	190	2	204	46	-	250	36	286
Miscellaneous metals-----	4	-	4	-	-	4	-	4	180	23	203	32	-	235	131	366
Total-----	37	-	37	9	1	47	9	56	2,531	215	2,746	459	9	3,214	601	3,815
Frequency rates per million man-hours																
Copper-----	0.55	-	0.42	0.15	10.31	0.28	0.36	0.30	59.64	17.45	49.89	9.21	10.31	25.06	12.73	21.61
Gold-silver-----	.89	-	.63	2.42	-	.71	-	.65	67.84	9.12	50.59	28.99	16.38	48.14	21.42	45.86
Iron-----	.42	-	.28	.06	-	1.13	.13	.13	52.14	19.94	41.50	7.93	36.34	30.82	14.70	55.14
Lead-zinc-----	1.55	-	1.24	-	-	1.23	.38	1.10	72.65	16.46	61.58	14.29	-	80.28	22.64	96.28
Uranium-----	.51	-	.41	.93	-	.61	-	.42	48.63	13.87	40.49	17.70	-	56.49	9.46	66.23
Miscellaneous metals-----	1.16	-	.99	-	-	.63	-	.22	52.41	37.45	50.14	17.70	-	66.97	11.29	20.38
Combined rate-----	.90	-	.69	.19	.97	.46	.18	.37	61.70	17.14	51.27	9.58	8.75	31.35	11.82	24.88
Severity rates per million man-hours																
Copper-----	3.287	-	2,527	925	61,882	1,688	2,171	1,823	1,784	689	1,531	507	72	905	565	810
Gold-silver-----	5.356	-	3,782	14,494	-	4,285	762	3,919	2,423	210	1,773	882	618	1,680	402	1,571
Iron-----	2.513	-	1,682	366	-	762	2,284	6,596	1,381	318	1,029	402	1,081	2,595	883	710
Lead-zinc-----	9.274	-	7,448	5,591	-	7,368	2,284	2,539	2,793	648	2,371	354	-	2,345	3,063	2,454
Uranium-----	3.071	-	2,441	-	-	3,658	-	1,336	3,103	282	2,524	354	-	1,652	403	1,270
Miscellaneous metals-----	6.988	-	5,928	-	-	3,776	-	1,336	2,605	282	2,253	618	-	1,610	464	1,870
Combined rate-----	5.412	-	4,145	1,127	5,831	2,751	1,062	2,191	2,288	486	1,866	467	267	1,196	756	1,050
Average men working daily																
Active operations					Average days active											
Under-ground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Underground mines	Surface	Total	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities
88	84	29	201	56	5,533	1,854	7,387	10,157	91	17,635	6,353	23,988	282	319	137	302
302	87	188	577	35	2,256	860	3,116	2,777	331	3,724	280	4,004	255	180	90	235
11	72	6	89	49	2,160	1,027	3,187	6,549	64	9,800	6,059	15,859	280	312	195	301
171	11	21	203	55	5,553	1,353	6,906	69	28	7,003	1,225	8,228	262	258	67	268
268	42	221	531	19	2,139	558	2,697	1,246	243	4,186	1,397	5,583	228	274	34	230
Miscellaneous metals-----	101	88	212	74	1,492	299	1,791	849	201	2,841	4,859	7,700	282	266	311	279
Total or average-----	941	384	488	1,813	288	19,133	5,951	25,084	958	45,189	20,173	65,362	267	309	133	282

TABLE B-11. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by mineral industry, 1971 - Continued

Mineral industry	Man-days worked							Man-hours worked									
	Underground mines				Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground	Surface	Total	Underground						Surface	Total						
-----Copper-----	1,600,108	480,074	2,080,182	3,237,171	12,492	5,329,845	2,073,610	7,403,455	12,776,638	3,840,603	16,617,241	25,949,214	96,959	42,663,414	16,581,265	59,244,679	
-----Gold-silver-----	561,966	232,947	794,913	49,874	29,941	874,728	81,677	956,405	4,481,112	1,864,323	6,345,435	413,962	243,277	7,000,674	653,473	7,654,147	
-----Iron-----	596,966	294,580	891,546	2,044,309	12,471	2,948,326	1,966,766	4,915,092	4,775,724	2,356,616	7,132,340	16,388,815	110,082	23,631,237	15,753,706	39,384,943	
-----Lead-zinc-----	1,455,618	356,933	1,812,551	17,818	1,872	1,832,261	328,186	2,160,427	11,645,101	2,855,284	14,500,385	14,500,385	15,826	14,657,711	2,626,586	17,284,297	
-----Uranium-----	487,673	126,152	613,825	341,455	8,241	963,521	441,707	1,405,228	3,906,997	1,009,599	4,916,596	3,219,718	65,926	8,202,240	3,613,292	11,815,532	
-----Miscellaneous metals-----	428,599	76,566	505,165	225,719	62,512	793,396	1,449,805	2,243,201	3,434,643	614,173	4,048,816	1,807,983	499,936	6,356,735	11,605,289	17,962,024	
Total-----	5,130,930	1,567,252	6,698,182	5,916,346	127,529	12,742,057	6,341,751	19,083,808	41,020,215	12,540,598	53,560,813	47,922,192	1,029,006	102,512,011	50,833,611	153,345,622	

TABLE B-12. - Injury experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by mineral industry, 1971

Mineral industry	Fatal					Nonfatal					Grand total		
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Underground mines					
	Underground	Surface						Underground	Surface			Total	
Injuries													
Antimony-----	-	-	-	-	-	-	-	-	7	-	7	1	8
Bauxite-----	-	-	-	-	-	-	-	3	3	-	6	94	100
Beryllium-----	-	-	-	-	-	-	-	1	2	1	3	3	6
Manganese-----	-	-	-	-	-	-	-	6	-	-	6	-	6
Mercury-----	3	-	3	-	3	-	3	46	5	-	51	8	59
Molybdenum-----	-	-	-	-	-	-	14	113	9	-	122	9	131
Titanium-----	-	-	-	-	-	-	-	3	-	-	3	8	11
Tungsten-----	1	-	1	-	1	-	6	32	4	-	36	8	44
Other metals 1/-----	-	-	-	-	-	-	-	-	1	-	1	-	1
Total-----	4	-	4	-	4	-	180	23	203	32	235	131	366
Frequency rates per million man-hours													
Antimony-----	-	-	-	-	-	-	251.09	-	209.34	-	167.14	66.49	140.55
Bauxite-----	-	-	-	-	-	-	32.84	-	26.27	7.92	12.18	10.34	10.44
Beryllium-----	-	-	-	-	-	-	130.28	-	94.06	43.16	295.86	38.11	38.11
Manganese-----	-	-	-	-	-	-	-	-	300.00	300.00	26.52	26.52	26.52
Mercury-----	14.24	-	10.87	-	7.82	5.05	204.05	46.00	166.70	47.72	132.97	37.91	99.23
Molybdenum-----	-	-	-	-	-	-	39.22	33.45	38.40	10.44	32.07	21.07	26.46
Titanium-----	-	-	-	-	-	-	-	-	-	12.80	32.07	21.07	10.07
Tungsten-----	1.77	-	1.51	-	1.44	.83	46.00	62.53	48.40	168.34	51.95	15.67	36.55
Other metals 1/-----	-	-	-	-	-	-	-	-	-	6.29	6.19	-	3.29
Combined rate-----	1.16	-	.99	-	.63	.22	52.41	37.45	50.14	17.70	36.97	11.29	20.38

1/ Not elsewhere classified.

TABLE B-12. - Injury experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by mineral industry, 1971 - Continued

Mineral industry	Fatal						Nonfatal									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Grand total	Underground mines			Open pit mines	Other surface	Total mining activities	Grand total		
	Underground	Surface						Total	Underground	Surface					Total	
		Underground	Surface							Total						
Severity rates per million man-hours																
Active operations						Average men working daily										
						Average days active										
Under-ground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground	Open pit mines	Other surface mining	Total mining activities	Grand total	Mills	Grand total				
Antimony-----	-	-	-	-	-	10,294	-	8,583	-	-	133	5,077				
Bauxite-----	-	-	-	-	-	8,419	-	6,735	-	-	312	1,800				
Beryllium-----	-	-	-	-	-	2,345	-	1,693	-	-	216	899				
Manganese-----	-	-	-	-	-	-	-	-	-	-	-	7,791				
Mercury-----	-	-	-	-	-	-	-	-	-	-	-	2,654				
Molybdenum-----	85,417	-	65,231	-	30,273	3,184	874	2,638	2,768	7,900	711	1,964				
Nickel-----	-	-	-	-	-	2,668	237	2,322	184	-	1,838	107				
Titanium-----	-	-	-	-	-	-	-	-	-	166	55	281				
Tungsten-----	-	-	-	-	-	796	177	706	743	-	540	657				
Other metals 1/-----	10,616	-	9,076	-	4,985	-	-	-	1,858	-	-	988				
Combined rate-----	6,988	-	5,928	-	1,336	2,605	282	2,253	618	-	464	870				
Average days active																
Active operations						Average days active										
Under-ground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground	Open pit mines	Other surface mining	Total mining activities	Grand total	Mills	Grand total				
Antimony-----	12	3	2	17	3	4	32	16	48	68	129	118				
Bauxite-----	1	4	-	5	10	187	243	3,715	3,958	253	253	306				
Beryllium-----	8	6	3	17	3	22	12	54	97	125	30	129				
Manganese-----	1	1	1	3	2	16	1	12	5	17	25	211				
Mercury-----	46	38	4	88	30	85	10	273	135	408	159	99				
Molybdenum-----	5	1	1	7	3	295	1	1,431	411	1,842	42	172				
Nickel-----	-	1	1	1	3	133	164	297	201	498	10	332				
Titanium-----	-	3	3	6	16	36	7	424	251	675	365	300				
Tungsten-----	27	30	4	61	8	77	8	86	71	157	145	234				
Other metals 1/-----	1	2	5	8	2	77	8	86	71	157	34	234				
Total or average-----	101	88	23	212	74	849	201	2,841	4,859	7,700	266	279				
Man-days worked																
Active operations						Average days active										
Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground	Open pit mines	Other surface mining	Total mining activities	Grand total	Mills	Grand total				
Underground	Surface	Total				Underground	Surface	Total								
Antimony-----	3,485	695	4,180	280	7,115	27,879	5,560	33,439	2,240	41,880	15,040	56,920				
Bauxite-----	11,418	2,855	14,273	47,311	1,197,614	91,346	22,837	114,183	378,563	492,746	9,088,054	9,580,800				
Beryllium-----	1,919	732	2,658	2,756	19,159	15,352	5,912	21,264	20,168	45,592	109,397	154,989				
Manganese-----	-	-	-	-	-	-	-	-	-	-	-	24,240				
Mercury-----	25,573	7,965	33,538	12,950	495	200	200	200	20,000	80	3,960	594,589				
Molybdenum-----	315,513	52,313	367,826	107,752	72,435	210,732	65,212	275,944	104,767	383,559	211,030	4,950,561				
Nickel-----	-	-	-	-	-	2,524,092	418,501	2,942,593	862,013	80	1,145,875	1,092,651				
Titanium-----	70,681	82,675	153,356	29,799	618,823	565,162	95,951	661,113	234,394	713,561	379,090	1,203,677				
Tungsten-----	-	-	-	-	-	86,674	1,015	63,835	150,509	8,120	510,683	303,597				
Other metals 1/-----	428,599	76,566	505,165	19,885	37,935	80	-	80	159,077	2,280	142,160	17,962,024				
Total-----																
Man-hours worked																
Active operations						Average days active										
Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground	Open pit mines	Other surface mining	Total mining activities	Grand total	Mills	Grand total				
Underground	Surface	Total				Underground	Surface	Total								
Antimony-----	3,485	695	4,180	280	7,115	27,879	5,560	33,439	2,240	41,880	15,040	56,920				
Bauxite-----	11,418	2,855	14,273	47,311	1,197,614	91,346	22,837	114,183	378,563	492,746	9,088,054	9,580,800				
Beryllium-----	1,919	732	2,658	2,756	19,159	15,352	5,912	21,264	20,168	45,592	109,397	154,989				
Manganese-----	-	-	-	-	-	-	-	-	-	-	-	24,240				
Mercury-----	25,573	7,965	33,538	12,950	495	200	200	200	20,000	80	3,960	594,589				
Molybdenum-----	315,513	52,313	367,826	107,752	72,435	210,732	65,212	275,944	104,767	383,559	211,030	4,950,561				
Nickel-----	-	-	-	-	-	2,524,092	418,501	2,942,593	862,013	80	1,145,875	1,092,651				
Titanium-----	70,681	82,675	153,356	29,799	618,823	565,162	95,951	661,113	234,394	713,561	379,090	1,203,677				
Tungsten-----	-	-	-	-	-	86,674	1,015	63,835	150,509	8,120	510,683	303,597				
Other metals 1/-----	428,599	76,566	505,165	19,885	37,935	80	-	80	159,077	2,280	142,160	17,962,024				
Total-----																

1/ Not elsewhere classified.

TABLE B-13. - Injury experience and worktime data by general work location at copper mines and mills in the United States, by State, 1971

State	/Fatal										Nonfatal									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total				
	Underground	Surface	Total						Underground	Surface	Total									
Injuries																				
Alaska-----	5	-	5	-	-	8	-	11	-	473	-	48	-	521	-	661	-	790		
Arizona-----	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
California-----	-	-	-	-	-	-	-	1	-	2	-	-	-	2	-	2	-	1		
Colorado-----	-	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	1		
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2		
Maine-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Michigan-----	-	-	-	-	-	-	-	-	-	51	-	5	-	56	-	56	7	63		
Montana-----	1	1	1	-	-	1	1	1	1	40	6	6	-	46	46	92	21	113		
Nevada-----	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	7	13	20		
New Mexico-----	1	1	1	1	1	1	1	1	1	188	7	7	-	195	34	229	23	252		
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	1	7		
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Tennessee-----	-	-	-	-	-	-	-	1	1	7	-	-	-	7	-	7	-	7		
Utah-----	-	-	-	-	-	-	-	1	1	-	-	-	-	-	6	-	17	23		
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total-----	7	-	7	4	1	12	6	18	6	762	67	829	239	1	1,069	211	-	1,280		
Frequency rates per million man-hours																				
Alaska-----	0.70	-	-	0.55	0.22	-	0.36	-	0.35	-	66.41	-	24.66	-	57.45	29.41	14.96	25.40		
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
California-----	-	-	-	-	-	-	-	-	-	-	81.68	-	-	-	63.12	58.38	-	26.13		
Colorado-----	-	-	-	-	-	-	33.09	-	33.09	-	-	-	-	-	-	33.09	-	33.09		
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	85.38	-	152.52	152.52	-	107.04		
Maine-----	-	-	-	-	-	-	-	-	-	207.21	-	120.67	-	-	-	16.36	21.72	17.44		
Michigan-----	-	-	-	-	-	-	-	-	-	16.20	-	17.93	-	-	16.36	18.68	13.52	16.81		
Montana-----	1.03	-	-	.50	-	.20	-	.15	-	41.01	-	5.81	-	15.79	22.92	3.39	10.94	6.15		
Nevada-----	-	-	-	-	.49	-	-	.61	.84	-	-	-	-	3.42	-	3.39	10.94	17.44		
New Mexico-----	1.62	-	-	1.08	-	.34	-	.25	-	305.20	-	22.35	-	209.87	17.08	78.30	21.34	62.96		
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	-	49.31	-	49.31	25.89	43.67		
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Tennessee-----	-	-	-	-	-	-	-	.77	4.69	8.26	-	-	-	6.40	-	6.40	-	5.36		
Utah-----	-	-	-	-	-	-	-	.11	.28	-	-	-	-	-	-	1.08	4.84	2.54		
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Combined rate-----	.55	-	-	.42	.15	.28	.36	.30	.36	59.64	17.45	49.89	9.21	10.31	25.06	12.73	-	21.61		

TABLE B-13. - Injury experience and worktime data by general work location at copper mines and mills in the United States, by State, 1971 - Continued

State	Fatal										Nonfatal									
	Underground mines					Open pit mines					Underground mines					Open pit mines				
	Underground		Surface			Other surface mining		Total			Underground		Surface			Other surface mining		Total		
	Mines	Mills	Underground	Surface	Total	Underground	Surface	Total	Grand total	Nills	Underground	Surface	Total	Grand total	Nills	Underground	Surface	Total	Grand total	Nills
Severity rates per million man-hours																				
Alaska-----	4,212	-	-	-	3,308	-	-	-	2,135	2,098	-	1,939	-	552	1,641	-	-	-	577	-
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
California-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana-----	6,152	-	-	-	2,989	-	-	-	1,218	5,049	-	2,308	-	86	1,166	-	-	-	568	-
Nevada-----	-	-	-	-	-	-	-	-	2,907	-	-	-	-	-	-	-	-	-	-	-
New Mexico-----	9,740	-	-	-	6,458	-	-	-	2,052	-	-	-	-	265	3,437	-	-	-	797	-
Oklahoma-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	3,287	-	-	-	2,527	-	-	-	1,688	2,171	-	1,784	-	689	1,531	-	-	-	507	-
Average men working daily										Average days active										
Active operations						Underground mines					Grand total					Grand total				
Mills		Underground				Other surface mining		Total			Open pit mines		Total			Open pit mines		Total		
Mills		Underground	Surface	Total	Grand total	Underground	Surface	Total	Grand total	Nills	Underground	Surface	Total	Grand total	Nills	Underground	Surface	Total	Grand total	Nills
Alaska-----	1	-	-	-	3,642	-	-	-	8,813	5,249	-	-	-	12,062	-	-	-	-	10	-
Arizona-----	89	26	2,863	779	5,135	36	-	-	1	1	325	-	-	1	311	10	-	-	319	-
California-----	5	1	5	-	6	1	-	-	12	3	176	-	-	15	57	207	-	-	319	-
Colorado-----	10	2	17	5	22	5	-	-	27	17	183	-	-	44	183	64	-	-	113	-
Idaho-----	10	1	10	1	11	9	-	-	25	25	198	-	-	25	121	163	-	-	161	-
Maine-----	1	1	4	7	11	-	-	-	11	4	149	-	-	15	149	-	-	-	151	-
Michigan-----	4	3	1,297	118	1,415	-	-	-	1,415	137	-	-	-	1,552	303	-	-	-	149	-
Montana-----	11	3	595	669	1,264	21	-	-	2,733	623	251	-	-	3,356	201	36	-	-	303	-
Nevada-----	15	3	5	1	6	7	-	-	750	412	345	-	-	1,162	62	216	-	-	226	-
New Mexico-----	27	9	301	145	446	10	-	-	1,279	433	300	-	-	1,712	260	94	-	-	342	-
Oklahoma-----	1	1	-	-	-	63	-	-	63	20	241	-	-	83	-	-	-	-	284	-
Oregon-----	1	1	2	-	2	-	-	-	2	-	-	-	-	2	75	-	-	-	75	-
Tennessee-----	7	1	413	121	534	-	-	-	534	82	-	-	-	616	256	-	-	-	325	-
Utah-----	16	5	16	5	21	2	-	-	1,962	1,370	355	-	-	3,332	156	20	-	-	353	-
Washington-----	2	1	5	1	6	-	-	-	6	3	-	-	-	9	102	-	-	-	102	-
Wyoming-----	1	-	-	2	2	-	-	-	2	-	-	-	-	2	10	-	-	-	10	-
Total or average-----	201	56	5,533	1,854	7,387	91	-	-	17,635	6,353	282	-	-	23,988	302	137	-	-	326	-

State	Man-days worked						Man-hours worked										
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface	Total						Underground	Surface	Total						
Alaska-----	890,187	243,271	1,133,458	10	7,456	2,807,253	1,077,770	3,885,023	10	7,121,900	1,946,169	9,068,069	80	53,355	22,477,437	8,622,154	31,099,591
Arizona-----	285		285	1,056	10	1,351	312	1,663		2,276		2,276	80	80	10,800	2,276	13,296
California-----	3,135	900	4,035		322	4,357	4,700	9,057		24,485	7,200	31,685		2,574	34,259	42,280	76,539
Colorado-----	1,160	169	1,329	988	1,464	3,781	3,781	3,781		9,257	1,352	10,609		11,712	30,225	30,225	42,280
Delaware-----																	
Idaho-----	603	1,035	1,638			1,638	696	2,334		4,826	8,287	13,113				5,571	18,684
Illinois-----	393,448	34,852	428,300			428,300	40,285	468,585		3,147,583		3,426,395			3,426,395	322,281	3,748,676
Michigan-----	124,901	129,007	253,917			618,718	194,094	812,812		975,281	1,032,058	2,007,339			4,925,747	1,552,752	6,478,499
Montana-----	271	101	372			256,209	150,356	406,565		2,168		2,168			2,064,232	1,188,462	3,252,714
Nevada-----	77,000	39,142	116,142			363,721	134,451	498,172		615,928	313,139	929,137			2,924,860	1,077,714	4,002,336
New Mexico-----						15,209	4,828	20,037							121,674	38,626	160,300
Oklahoma-----	150		150			136,649	26,670	163,319		1,200		1,200			1,095,366	213,366	1,308,732
Oregon-----	105,901	30,748	136,649			691,870	458,728	1,150,598		847,420	5,695	853,115		320	5,535,336	3,509,827	9,045,203
Tennessee-----	109		109		40	600	720	1,320		3,913		3,913			4,873	5,760	10,633
Utah-----	489		489														
Washington-----																	
Wyoming-----																	
Total-----	1,600,108	480,074	2,080,182	3,237,171	12,492	5,329,845	2,073,610	7,403,455		12,776,638	3,840,603	16,617,241		96,959	42,663,414	16,581,265	59,244,679

TABLE B-14. - Injury experience and worktime data by general work location at gold-silver mines and mills in the United States, by State, 1971

State	Fatal					Nonfatal												
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Injuries									
	Underground	Surface							Total	Underground	Surface		Total	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4			
Arizona-----	-	-	-	-	-	-	10	-	-	-	-	-	-	-	10			
California-----	-	-	-	-	-	-	2	-	-	-	-	-	-	-	5			
Colorado-----	1	1	1	2	2	2	27	2	3	28	-	3	3	3	31			
Idaho-----	2	2	2	172	4	4	172	1	1	176	-	1	1	1	178			
Montana-----	-	-	-	-	-	-	4	1	1	5	-	5	5	1	6			
Nevada-----	-	-	-	-	-	-	2	1	3	8	-	8	8	1	19			
New Mexico-----	-	-	-	-	-	-	2	1	1	3	-	1	1	-	1			
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
South Dakota-----	1	1	1	78	8	8	78	86	-	86	-	-	-	-	86			
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Washington-----	-	-	-	9	1	1	9	10	-	10	-	1	1	1	11			
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total-----	4	-	4	1	-	5	304	17	12	321	4	337	14	351				

TABLE B-14. - Injuries and experience and worktime data by general work location at gold-silver mines and mills in the United States, by State, 1971 - Continued

State	Fatal					Nonfatal								
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface												
		Underground	Surface											
	Frequency rates per million man-hours													
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	24.34
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	109.28
California-----	-	-	-	-	-	-	-	-	-	-	-	-	-	50.37
Colorado-----	3.75	2.86	206.40	-	-	4.78	12.18	80.22	196.67	-	52.37	-	53.90	74.05
Idaho-----	1.27	1.04	-	-	5.51	.98	109.07	11.68	137.97	-	91.52	-	9.51	87.29
Montana-----	-	-	-	-	-	-	54.04	83.22	58.11	-	49.23	-	173.28	55.90
Nevada-----	-	-	-	-	-	-	45.93	75.99	24.35	-	26.25	-	46.92	32.23
New Mexico-----	-	-	-	-	-	-	-	95.35	34.62	-	28.21	-	-	26.21
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota-----	.44	.27	-	-	.25	-	34.00	5.88	23.53	-	23.52	-	-	21.84
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	88.10	78.68	87.06	-	77.81	-	34.26	69.75
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	.89	.63	2.42	-	.71	-	67.84	9.12	50.59	28.99	16.58	48.14	21.42	45.86
Severity rates per million man-hours														
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	907
Arizona-----	-	-	-	-	-	-	1,976	-	1,666	-	1,057	915	-	1,279
California-----	-	-	-	-	-	-	1,119	-	740	-	-	1,289	-	2,458
Colorado-----	22,478	17,189	1,238,390	-	33,060	-	3,503	24	2,684	-	-	2,555	-	2,389
Idaho-----	7,610	6,252	-	-	6,205	-	2,780	85	2,299	8,278	-	2,313	1,132	2,416
Montana-----	-	-	-	-	-	-	1,500	666	1,383	-	-	1,172	428	1,212
Nevada-----	-	-	-	-	-	-	482	76	388	317	-	301	721	422
New Mexico-----	-	-	-	-	-	-	-	2,288	831	-	-	629	-	629
North Carolina-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota-----	2,615	1,642	-	-	1,641	-	2,205	133	1,434	-	-	1,433	-	1,331
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington-----	-	-	-	-	-	-	1,840	11,567	2,916	-	-	2,606	720	2,257
Wyoming-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combined rate-----	5,356	3,782	14,494	-	4,285	-	2,423	210	1,773	882	618	1,680	402	1,571
Average men working daily														
Active operations	Average days active													
Mines	Mills	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills
		Underground	Surface	Total										
Alaska-----	57	1	7	-	28	122	157	2	159	44	72	142	125	75
Arizona-----	50	2	61	10	21	12	104	3	107	124	106	32	110	32
California-----	113	5	66	23	32	61	183	10	173	81	59	48	66	48
Colorado-----	131	10	212	72	17	40	341	33	374	155	37	29	135	211
Idaho-----	56	4	778	167	10	26	981	47	1,028	255	99	35	248	280
Montana-----	66	3	79	11	14	11	115	7	122	120	112	35	111	103
Nevada-----	52	7	43	12	145	24	224	69	293	130	271	177	226	309
New Mexico-----	16	-	20	5	4	5	34	-	34	140	280	8	137	-
North Carolina-----	1	-	-	-	2	-	2	-	2	-	16	-	16	-
Oregon-----	23	1	10	10	1	20	31	1	32	25	10	42	35	16
South Dakota-----	2	1	931	552	-	2	1,485	96	1,581	308	-	82	308	365
Utah-----	2	1	3	1	-	7	4	-	4	78	-	-	78	-
Washington-----	9	1	46	7	2	7	62	12	74	271	22	219	257	304
Wyoming-----	1	-	-	-	-	1	1	-	1	-	-	10	10	-
Total or average-----	577	35	2,256	860	277	331	3,724	280	4,004	255	180	90	235	292

TABLE B-14. - Injury experience and worktime data by general work location at gold-silver mines and mills in the United States, by State, 1971 - Continued

State	Man-days worked						Man-hours worked									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground		Total						Underground	Surface	Total					
	Underground	Surface														
Alaska-----	310	-	310	2,017	17,323	19,650	150	19,800	3,000	-	3,000	18,888	140,921	162,809	1,500	164,309
Arizona-----	7,443	1,377	8,820	2,421	17,443	19,650	95	11,520	59,210	11,019	70,229	17,482	3,056	90,767	745	91,512
California-----	4,850	2,370	7,220	1,936	2,957	12,113	478	15,700	58,111	15,254	73,365	15,254	22,117	95,482	3,792	99,274
Colorado-----	33,826	10,262	44,088	6,311	1,159	52,863	6,965	52,863	266,959	82,125	349,084	4,845	9,082	362,961	105,179	418,642
Idaho-----	198,522	42,812	241,334	994	243,238	13,147	256,385	342,480	1,919,439	7,248	1,934,048	7,248	7,361	1,934,048	105,179	2,039,227
Montana-----	9,254	1,502	10,756	1,564	390	12,710	721	13,431	74,024	12,017	86,041	12,408	3,122	101,571	5,771	107,342
Nevada-----	5,497	1,645	7,142	39,304	4,237	50,683	21,330	72,013	43,546	13,160	85,708	328,481	33,896	419,083	170,493	589,576
New Mexico-----	2,188	1,311	3,499	1,120	38	4,657	-	4,657	18,400	10,488	28,888	8,962	304	38,152	-	38,152
North Carolina-----	-	-	-	32	-	32	-	32	-	-	-	80	6,590	8,679	128	8,807
Oregon-----	249	-	249	839	-	1,088	16	1,114	2,009	-	2,009	80	1,310	3,655,886	281,018	3,936,904
South Dakota-----	286,753	170,069	456,822	-	164	456,986	35,127	492,113	1,360,545	80	3,654,576	-	1,310	2,515	-	2,515
Utah-----	304	10	314	-	-	314	-	314	2,435	80	2,515	-	-	2,515	-	2,515
Washington-----	12,770	1,589	14,359	45	1,530	15,934	3,648	19,582	12,709	114,867	128,525	220	13,438	128,525	29,186	157,711
Wyoming-----	-	-	-	-	10	10	-	10	-	-	-	-	80	80	-	80
Total-----	561,966	232,947	794,913	49,874	29,941	874,728	81,677	956,405	4,481,112	1,864,323	6,345,435	413,962	241,277	7,000,674	653,473	7,654,147

TABLE B-15. - Injury experience and worktime data by general work location at iron mines and mills in the United States, by State, 1971

State	Fatal					Nonfatal										
	Underground mines			Open pit mines	Other surface mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground		Surface					Total	Underground	Surface						Total
	Underground	Surface														
Injuries																
Alabama-----	-	-	-	-	-	-	-	-	-	-	-	2	2	-	2	
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arkansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
California-----	-	-	-	-	1	1	2	-	-	19	-	-	19	16	35	
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Connecticut-----	-	-	-	-	-	-	-	-	-	6	1	7	7	-	7	
Delaware-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Idaho-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Minnesota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Missouri-----	2	2	-	-	2	1	3	133	38	171	-	1	171	16	187	
Montana-----	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	
Nevada-----	-	-	-	-	-	-	-	-	-	-	9	-	9	-	9	
New Mexico-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
New York-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
North Carolina-----	-	-	-	-	-	-	-	2	-	2	-	2	2	5	7	
North Dakota-----	-	-	-	-	-	-	-	1	-	1	-	-	1	-	1	
Pennsylvania-----	-	-	-	-	-	-	-	13	2	15	1	-	16	1	17	
Texas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	2	-	2	4	6	
Wyoming-----	-	-	-	-	-	-	-	15	2	17	1	-	18	1	19	
Total-----	2	-	2	1	-	2	5	249	47	296	130	4	430	149	579	

TABLE 8-16. - Injury experience and worktime data by general work location at lead-zinc mines and mills in the United States, by State, 1971

State	Fatal					Nonfatal				
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total		
	Underground	Surface							Total	
		Underground	Surface							Total
Injuries										
Arizona-----	-	-	-	-	-	-	-	7	-	7
California-----	-	-	-	-	-	-	-	31	2	33
Colorado-----	1	1	1	-	-	-	-	207	7	214
Idaho-----	-	3	3	-	-	-	-	172	1	173
Illinois-----	-	-	-	-	-	-	-	2	2	4
Kentucky-----	-	-	-	-	-	-	-	9	1	10
Maine-----	-	-	-	-	-	-	-	3	1	4
Missouri-----	3	3	3	-	-	-	-	66	7	73
Montana-----	-	-	-	-	-	-	-	2	6	8
Nevada-----	-	-	-	-	-	-	-	1	1	2
New Jersey-----	1	1	1	-	-	-	-	23	-	24
New Mexico-----	-	-	-	-	-	-	-	32	11	43
New York-----	1	1	1	-	-	-	-	58	2	60
Ohio-----	-	-	-	-	-	-	-	6	1	7
Oklahoma-----	-	-	-	-	-	-	-	16	2	18
Pennsylvania-----	2	2	2	-	-	-	-	78	12	90
Tennessee-----	4	4	4	-	-	-	-	120	1	121
Utah-----	3	3	3	-	-	-	-	38	2	40
Virginia-----	-	-	-	-	-	-	-	19	3	22
Washington-----	-	-	-	-	-	-	-	4	2	6
Wisconsin-----	-	-	-	-	-	-	-	-	-	-
Total-----	18	-	18	-	-	18	1	893	60	953
Frequency rates per million man-hours										
Arizona-----	-	-	-	-	-	-	-	209.09	-	192.25
California-----	-	-	-	-	-	-	-	134.29	-	123.77
Colorado-----	0.63	-	-	-	-	0.51	-	104.98	59.19	123.77
Idaho-----	1.62	-	0.51	-	-	1.37	-	78.84	24.97	95.01
Illinois-----	-	-	1.38	-	-	-	-	53.35	27.90	73.20
Kentucky-----	-	-	-	-	-	-	-	161.50	-	36.64
Maine-----	-	-	-	-	-	-	-	121.71	-	127.85
Missouri-----	1.24	-	-	-	-	.90	-	19.71	21.37	26.95
Montana-----	-	-	-	-	-	-	-	46.78	12.99	18.78
Nevada-----	-	-	-	-	-	-	-	63.74	26.12	28.88
New Jersey-----	4.33	-	3.67	-	-	3.67	-	84.39	-	40.14
New Mexico-----	-	-	-	-	-	-	-	129.15	-	78.86
New York-----	1.46	-	1.10	-	-	1.10	-	63.94	113.54	123.09
Oklahoma-----	-	-	-	-	-	-	-	53.75	16.59	58.38
Pennsylvania-----	6.27	-	5.30	-	-	5.30	-	42.38	18.83	42.49
Tennessee-----	2.74	-	2.26	-	-	2.26	-	44.09	-	36.39
Utah-----	1.62	-	1.40	-	-	1.39	-	55.83	22.46	39.08
Virginia-----	-	-	-	-	-	-	20.84	63.15	6.35	52.42
Washington-----	-	-	-	-	-	-	-	78.32	41.68	75.02
Wisconsin-----	-	-	-	-	-	-	-	89.04	35.79	74.02
Combined rate-----	1.55	-	1.24	-	-	1.23	.38	46.44	36.46	42.56
								60.92	22.84	55.14

TABLE B-16- Injury experience and worktime data by general work location at lead-zinc mines and mills in the United States, by State, 1971 - Continued

State	Man-days worked						Man-hours worked									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground		Total						Underground	Surface	Total					
	Underground	Surface														
Arizona-----	3,586	611	4,197	200	166	4,563	-	4,563	28,588	4,891	33,479	1,600	1,331	36,410	-	36,410
California-----	24,480	4,488	28,968	180	69	29,217	4,224	33,441	194,940	35,904	230,844	1,440	551	232,835	33,792	266,627
Colorado-----	199,458	47,008	246,466	30	10	246,506	35,039	281,545	1,595,665	376,074	1,971,739	2,440	80	1,972,059	280,302	2,252,361
Idaho-----	231,640	41,114	272,754	20	64	272,838	22,633	295,471	1,852,610	328,917	2,181,527	160	512	2,182,199	181,074	2,363,273
Illinois-----	3,818	867	4,685	-	-	4,685	8,961	13,646	30,354	6,936	37,490	-	-	37,490	71,689	109,179
Kentucky-----	4,888	1,304	6,192	-	-	7,822	1,630	7,822	39,108	10,429	49,537	-	-	49,537	13,036	62,573
Maine-----	2,465	616	3,081	9,624	-	12,705	5,850	18,555	19,718	4,930	24,648	76,992	-	101,640	46,800	148,440
Missouri-----	303,589	114,973	418,562	-	-	418,562	67,379	485,941	2,428,716	919,783	3,348,499	-	-	3,348,499	539,033	3,887,532
Montana-----	4,684	667	5,351	102	474	5,927	28,714	34,661	37,433	5,319	42,752	770	3,795	47,317	229,693	277,010
Nevada-----	1,294	666	1,960	720	313	2,993	240	3,233	10,360	5,328	15,688	5,760	2,502	23,950	29,960	24,910
New Jersey-----	28,613	5,312	33,925	-	-	33,925	2,317	36,242	231,108	41,420	272,528	-	-	272,528	19,116	291,644
New Mexico-----	26,015	4,956	30,971	-	586	31,557	11,938	43,495	208,124	39,648	247,772	-	4,692	252,464	96,879	349,343
New York-----	85,880	27,511	113,391	-	-	113,391	5,073	128,464	687,046	220,089	907,135	-	-	907,135	120,587	1,027,722
Oklahoma-----	10,163	3,790	13,953	-	-	13,953	6,603	20,556	81,308	30,320	111,628	-	-	111,628	53,059	164,687
Pennsylvania-----	39,864	7,331	47,195	-	-	47,195	7,771	54,966	318,916	38,511	357,427	-	-	377,567	439,741	439,741
Tennessee-----	182,276	38,838	221,114	-	-	221,114	66,782	287,896	1,458,200	310,718	1,768,918	-	-	1,768,918	534,261	2,303,179
Utah-----	232,136	36,547	268,683	-	190	268,873	19,680	288,553	1,837,092	292,379	2,129,471	-	1,363	2,130,834	157,438	2,308,272
Virginia-----	46,791	13,857	60,648	-	-	60,648	5,997	66,645	374,228	110,853	485,081	-	-	485,181	47,979	533,160
Washington-----	16,450	3,281	19,731	6,942	-	26,473	10,478	37,151	26,249	183,867	210,116	55,538	-	213,385	83,820	297,205
Wisconsin-----	7,528	3,196	10,724	-	-	10,724	6,877	17,601	35,689	26,446	62,135	-	-	86,135	54,854	140,989
Total-----	1,455,618	356,933	1,812,551	17,818	1,872	1,832,241	328,186	2,160,427	11,645,101	2,855,284	14,500,385	142,500	14,826	14,657,711	2,626,586	17,284,297

TABLE B-17. - Injury experience and worktime data by general work location at uranium mines and mills in the United States, by State, 1971

State	Fatal						Nonfatal										
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface	Total						Underground	Surface	Total						
Injuries																	
Alaska-----	-	-	-	-	-	-	-	-	5	1	6	-	-	-	6	-	6
Arizona-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Arkansas-----	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1
California-----	-	-	-	-	-	-	-	-	42	3	45	-	-	-	45	1	46
Colorado-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Illinois-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kansas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico-----	2	-	2	-	2	-	-	2	57	2	59	1	-	-	60	10	70
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota-----	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	4	5
Texas-----	-	-	-	-	-	-	-	-	51	3	54	4	-	-	54	2	56
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	-	-	-	-	3	-	-	3	34	4	38	41	-	-	79	14	93
Total-----	2	-	2	3	-	5	-	5	190	14	204	46	-	-	250	36	286

TABLE B-17. - Injury experience and worktime data by general work location at uranium mines and mills in the United States, by State, 1971 - Continued

State	Active operations		Average men working daily							Average days active								
	Mines	Mills	Underground mines				Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
			Underground		Surface													Total
			Underground	Surface	Underground	Surface												
Alaska-----	1	-	18	8	26	-	-	-	26	-	26	294	-	-	294	-	-	
Arizona-----	2	-	-	-	-	-	2	2	2	-	2	-	-	10	10	-	-	
Arkansas-----	3	1	-	-	-	21	-	23	121	144	-	256	10	206	206	365	-	
California-----	1	-	5	1	6	-	-	6	6	-	6	206	-	-	206	-	-	
Colorado-----	206	4	683	233	916	5	78	999	280	1,279	217	27	32	201	338	-	-	
Illinois-----	2	-	-	-	-	-	2	2	2	2	-	-	-	10	10	-	-	
Iowa-----	2	-	-	-	-	-	2	2	2	2	-	-	-	10	10	-	-	
Nebraska-----	4	-	-	-	-	-	4	4	5	5	-	14	51	43	-	-	-	
Nevada-----	4	-	-	-	-	1	-	22	1,453	414	1,867	239	303	19	246	292	-	
New Mexico-----	50	3	1,019	194	1,213	-	218	1	1	1	98	251	-	10	10	-	-	
Oregon-----	1	-	-	-	-	-	-	18	29	69	98	251	250	10	101	365	-	
South Dakota-----	23	1	4	3	7	-	139	9	148	85	233	-	149	10	141	284	-	
Texas-----	17	2	-	-	-	-	14	39	400	50	450	209	16	19	184	363	-	
Utah-----	110	1	277	70	347	-	12	-	12	29	41	-	132	-	132	353	-	
Washington-----	1	1	-	-	-	-	832	64	1,078	349	1,427	230	296	63	271	302	-	
Wyoming-----	108	6	133	49	182	-	-	-	-	-	-	-	-	-	-	-	-	
Total or average-----	531	19	2,139	558	2,697	1,246	243	4,186	1,397	5,583	228	274	34	230	316	-	-	
Man-days worked																		
Man-hours worked																		
State	Underground mines		Open pit mines			Total mining activities			Underground mines			Open pit mines			Total mining activities			Grand total
	Underground	Surface	Total	Open pit mines	Other surface mining	Grand total	Mills	Grand total	Underground	Surface	Total	Open pit mines	Other surface mining	Total mining activities	Mills			
Alaska-----	5,224	2,428	7,652	-	-	7,652	-	7,652	41,795	19,423	61,218	-	-	61,218	-	61,218		
Arizona-----	-	-	-	-	20	20	-	20	-	-	-	-	160	160	160	-	160	
Arkansas-----	-	-	-	5,370	20	5,390	44,165	49,555	-	-	-	42,957	160	43,117	353,317	-	396,434	
California-----	1,139	96	1,235	-	-	1,235	-	1,235	9,108	768	9,876	-	-	9,876	-	9,876	-	
Colorado-----	148,963	49,428	198,391	137	2,496	201,024	94,688	295,712	1,191,677	395,393	1,587,070	1,092	19,971	1,608,133	757,509	2,365,642	-	
Illinois-----	-	-	-	-	20	20	-	20	-	-	-	-	160	160	160	-	160	
Iowa-----	-	-	-	-	20	20	-	20	-	-	-	-	160	160	160	-	160	
Nebraska-----	-	-	-	-	20	20	-	20	-	-	-	-	160	160	160	-	160	
Nevada-----	-	-	-	14	203	217	-	217	1,944,316	378,598	2,322,914	112	1,622	1,734	-	1,734		
New Mexico-----	243,038	47,324	290,362	66,018	419	356,799	121,018	477,817	1,944,316	378,598	2,322,914	528,144	3,354	2,854,412	968,149	3,822,561		
Oregon-----	-	-	-	-	10	10	-	10	-	-	-	-	80	80	80	-	80	
South Dakota-----	1,000	756	1,756	1,000	180	2,936	25,185	28,121	9,000	6,804	15,804	9,000	1,440	26,244	201,480	227,724		
Texas-----	-	-	-	20,754	90	20,844	22,440	43,284	-	-	-	190,569	720	191,289	179,550	370,809		
Utah-----	57,551	14,978	72,529	231	745	73,505	18,381	91,886	458,082	118,468	576,550	1,847	5,950	584,347	147,048	731,393		
Washington-----	-	-	-	1,580	-	1,580	10,307	11,887	-	-	-	12,642	-	12,642	82,456	95,098		
Wyoming-----	30,758	11,142	41,900	246,351	4,018	292,269	105,523	397,792	253,019	90,145	343,164	2,433,355	32,149	2,808,668	923,813	3,732,481		
Total-----	487,673	126,152	613,825	341,455	8,241	963,521	441,707	1,405,228	3,906,997	1,009,599	4,916,596	3,219,718	65,926	8,202,240	3,613,292	11,815,532		

TABLE B-18. - Injury experience and worktime data by general work location at miscellaneous metal mines and mills in the United States, by State, 1971 - Continued

State	Active operations		Average men working daily							Average days active								
	Mines	Mills	Underground mines				Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
			Underground		Surface													Total
			Underground	Surface	Underground	Surface												
Alabama-----	7	3	-	12	3	15	8	2	25	416	416	248	70	90	178	365	1,215,288	
Alaska-----	6	-	2	-	-	-	2	2	6	10	35	36	10	10	19	167	63,125	
Arizona-----	7	4	45	11	56	189	4	245	903	275	1,148	255	250	10	251	220	2,080,698	
Arkansas-----	76	23	310	61	371	64	4	439	275	714	1,95	166	66	16	189	241	3,788,999	
California-----	19	6	956	178	1,134	10	5	1,149	312	1,461	323	323	66	16	320	340	4,224,477	
Colorado-----	2	-	-	-	-	-	145	145	-	-	145	-	-	-	364	364	130,410	
Florida-----	1	2	-	-	-	-	19	19	45	45	64	150	304	10	164	362	56,690	
Georgia-----	6	2	17	3	20	3	1	24	24	16	40	150	-	-	164	324	72,864	
Idaho-----	-	-	-	-	-	-	-	-	-	1,161	1,161	139	177	-	-	365	154	
Louisiana-----	3	-	4	1	5	9	-	14	14	9	23	139	89	104	155	200	200	
Montana-----	61	16	65	20	85	34	20	139	139	130	269	194	341	-	341	249	341	
Nevada-----	1	-	-	-	-	23	-	23	23	18	41	25	361	-	361	355	361	
New Jersey-----	3	2	-	1	1	305	-	306	110	416	234	289	196	-	196	289	289	
New Mexico-----	1	1	-	-	-	108	-	108	126	224	114	289	-	-	289	196	196	
New York-----	1	1	69	21	90	-	78	1	82	4	86	10	243	110	233	27	27	
North Carolina-----	6	2	3	-	3	1	-	1	1	-	1	300	250	-	250	-	-	
Ohio-----	1	-	4	-	4	13	-	4	4	1,237	1,241	136	173	50	300	293	293	
Oregon-----	5	1	4	-	4	2	-	2	2	12	14	10	140	-	140	161	161	
South Dakota-----	1	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	
Texas-----	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Utah-----	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Virginia-----	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington-----	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total or average-----	212	74	1,492	294	1,791	849	201	2,841	4,859	7,700	282	266	311	279	298	298	298	

State	Active operations		Average men working daily							Average days active								
	Mines	Mills	Underground mines				Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
			Underground		Surface													Total
			Underground	Surface	Underground	Surface												
Alabama-----	2,914	804	3,718	561	180	4,459	151,911	151,911	29,137	8,040	37,177	5,610	1,440	44,227	1,215,288	1,215,288		
Alaska-----	11,418	2,855	14,273	72	20	112	198,487	260,101	91,346	22,837	114,183	378,786	160	160	895	895		
Arizona-----	61,575	10,776	72,351	10,600	40	82,991	149,176	492,603	86,252	86,252	86,252	84,686	320	320	663,861	2,080,698		
Arkansas-----	314,468	52,172	366,640	658	80	367,378	106,043	473,421	2,515,740	417,373	2,933,113	6,384	760	2,940,257	530,553	1,194,414		
California-----	-	-	-	-	-	-	16,301	52,810	52,810	-	-	-	422,477	422,477	422,477	3,788,999		
Colorado-----	-	-	-	-	-	-	5,178	9,109	18,792	5,272	24,064	7,296	56,690	56,690	130,410	187,100		
Florida-----	2,350	659	3,009	912	10	3,931	423,894	423,894	4,800	760	5,560	12,714	31,440	31,440	72,864	72,864		
Georgia-----	600	95	695	1,589	-	2,284	1,387	3,671	4,800	760	5,560	12,714	16,129	16,129	23,367	23,367		
Idaho-----	13,469	3,030	16,499	3,026	2,076	5,102	26,063	47,664	107,782	24,240	132,022	24,240	16,129	16,129	380,900	380,900		
Louisiana-----	-	-	-	7,854	-	7,854	4,490	12,344	12,344	-	200	62,832	-	-	62,832	98,749		
Montana-----	-	25	25	110,252	-	110,252	39,017	149,294	149,294	200	200	882,213	-	-	882,213	1,194,414		
Nevada-----	-	-	-	21,165	-	21,165	24,663	45,828	45,828	49,199	208,146	169,322	-	-	169,322	366,629		
New Jersey-----	19,868	6,150	26,018	18,963	110	19,103	108	19,211	158,947	49,199	208,146	151,749	880	-	152,600	366,629		
New Mexico-----	30	-	30	250	-	250	362,336	362,336	9,600	240	240	2,000	-	-	2,000	153,733		
New York-----	-	-	-	2,248	100	2,348	13,195	16,168	5,001	-	9,600	17,984	1,000	9,600	2,898,685	2,898,685		
North Carolina-----	625	-	625	280	-	280	1,932	2,212	5,001	-	5,001	23,985	1,000	23,985	105,557	129,562		
Ohio-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
South Dakota-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Texas-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Utah-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Virginia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total-----	428,599	76,566	505,165	225,719	62,512	793,396	1,449,805	2,243,201	3,434,643	614,173	4,048,816	1,807,983	499,936	6,356,735	11,605,289	17,962,024	17,962,024	

TABLE B-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1971

State	Fatal					Nonfatal					Grand total		
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total					
	Underground	Surface	Total										
Injuries													
Alabama-----	-	-	-	-	-	-	-	12	-	-	2	6	8
Alaska-----	-	-	-	-	-	-	-	488	1	13	17	-	17
Arizona-----	5	-	5	3	-	8	-	3	50	538	678	129	807
Arkansas-----	-	-	-	-	-	-	-	3	-	3	6	36	42
California-----	4	-	4	1	-	5	-	61	-	88	95	28	123
Colorado-----	2	-	2	1	-	3	-	367	28	395	395	16	411
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia-----	-	-	-	-	-	-	-	-	-	-	7	-	7
Idaho-----	5	-	5	-	1	6	-	343	5	348	350	2	352
Illinois-----	-	-	-	-	-	-	-	2	2	2	2	2	4
Kentucky-----	-	-	-	-	-	-	-	7	1	8	-	-	8
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	22	22
Maine-----	-	-	-	-	-	-	-	4	1	5	5	1	6
Michigan-----	-	-	-	-	-	-	-	136	10	146	177	74	251
Minnesota-----	-	-	-	-	-	-	-	-	-	-	55	37	92
Missouri-----	5	-	5	-	-	5	-	191	46	237	237	23	260
Montana-----	1	-	1	-	-	1	-	47	7	54	104	28	132
Nebraska-----	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	-	-	-	1	-	1	-	19	3	22	47	25	72
New Jersey-----	1	-	1	-	-	1	-	23	-	23	2	2	27
New Mexico-----	3	-	3	-	-	3	-	273	14	287	337	48	385
New York-----	1	-	1	-	-	1	-	55	5	60	61	13	74
North Carolina-----	-	-	-	-	-	-	-	24	4	28	28	2	30
Oklahoma-----	-	-	-	-	-	-	-	6	6	6	12	2	14
Oregon-----	-	-	-	-	-	-	-	-	-	-	1	-	1
Pennsylvania-----	2	-	2	-	-	2	-	29	2	31	32	1	33
South Dakota-----	1	-	1	-	-	1	-	79	8	87	87	4	91
Tennessee-----	4	-	4	-	-	4	-	85	-	85	85	12	97
Texas-----	-	-	-	-	-	-	-	-	-	-	-	36	40
Utah-----	3	-	3	-	-	3	-	168	6	174	187	23	210
Virginia-----	-	-	-	-	-	-	-	31	7	38	38	2	40
Washington-----	-	-	-	-	-	-	-	25	4	29	29	6	35
Wisconsin-----	-	-	-	-	-	-	-	4	-	4	6	-	10
Wyoming-----	-	-	-	-	-	3	-	49	6	55	97	15	112
Total-----	37	-	37	9	1	47	56	2,531	215	2,746	459	601	3,815

TABLE B-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1971 - Continued

State	Fatal					Nonfatal											
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	
	Underground	Surface							Underground	Surface							Total
		Surface	Total							Surface	Total						
Frequency rates per million man-hours																	
Alabama-----	-	-	-	-	-	-	-	-	-	-	-	-	-	54.07	9.75	4.72	5.41
Alaska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	28.10	63.35	-	58.88
Arizona-----	0.69	-	-	0.22	-	0.35	0.35	0.35	67.68	25.48	58.65	10.47	29.98	14.95	14.95	14.95	25.83
Arkansas-----	-	-	-	-	-	-	-	-	32.84	-	26.27	7.11	11.13	18.54	16.93	16.93	16.93
California-----	5.18	-	-	.49	-	1.67	.65	1.33	79.05	47.02	73.87	13.19	31.77	18.32	27.22	27.22	27.22
Colorado-----	.36	-	.29	28.13	-	.43	.34	1.33	65.60	21.91	57.47	-	56.90	8.06	46.04	46.04	46.04
Florida-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho-----	1.45	-	1.21	-	-	1.43	-	1.33	99.20	7.37	84.15	107.72	47.69	-	22.01	22.01	22.01
Illinois-----	-	-	-	-	-	-	-	-	65.46	-	53.35	37.41	83.69	6.10	78.05	36.58	36.58
Kentucky-----	-	-	-	-	-	-	-	-	178.99	95.89	161.50	-	161.50	271.90	127.65	127.65	127.65
Louisiana-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine-----	-	-	-	-	-	-	-	-	162.97	75.66	132.41	-	43.57	19.09	6.49	6.49	6.49
Michigan-----	-	-	-	-	-	-	-	-	30.51	12.12	27.64	19.56	25.83	23.69	38.90	38.90	38.90
Minnesota-----	-	-	-	-	-	-	-	-	-	-	-	5.02	4.97	3.85	4.45	4.45	4.45
Missouri-----	1.27	-	.90	-	-	.90	1.01	.92	48.52	28.89	42.86	-	42.86	23.19	39.87	39.87	39.87
Montana-----	.92	-	.47	-	-	.20	-	.14	43.06	6.67	25.21	16.98	20.39	15.56	19.13	19.13	19.13
Nebraska-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada-----	-	-	-	.39	-	.62	-	.45	115.96	68.91	106.08	9.74	16.55	15.41	16.13	16.13	16.13
New Jersey-----	4.33	-	3.67	-	-	2.98	-	2.56	99.52	-	84.39	31.83	74.55	36.34	69.16	69.16	69.16
New Mexico-----	1.08	-	.85	-	-	.43	-	.32	97.96	18.87	81.33	14.64	48.44	19.55	40.91	40.91	40.91
New York-----	1.05	-	.82	-	-	.66	-	.40	57.66	18.45	48.99	3.35	40.04	12.95	29.28	29.28	29.28
North Carolina-----	-	-	-	-	-	-	-	-	135.60	75.66	121.81	-	121.76	36.01	105.08	105.08	105.08
Oklahoma-----	-	-	-	-	-	-	-	-	73.79	-	53.75	49.31	51.44	21.80	43.07	43.07	43.07
Oregon-----	-	-	-	-	-	-	-	-	-	-	-	6.59	6.14	-	6.10	6.10	6.10
Pennsylvania-----	1.15	-	.77	-	-	.75	-	.66	16.73	2.29	11.90	19.81	12.05	2.79	10.95	10.95	10.95
South Dakota-----	.43	-	.27	-	-	.27	-	.24	34.30	5.85	23.70	-	23.70	8.29	21.84	21.84	21.84
Tennessee-----	1.74	-	1.40	-	-	1.40	1.34	1.39	36.87	-	29.70	-	29.70	16.05	26.87	26.87	26.87
Texas-----	-	-	-	-	-	-	-	-	-	-	-	12.11	11.74	10.89	10.97	10.97	10.97
Utah-----	-	-	1.09	-	-	.35	-	.32	71.70	14.40	63.05	2.21	21.65	5.74	16.61	16.61	16.61
Virginia-----	1.28	-	-	-	-	15.76	.25	1.82	82.82	63.15	78.32	-	77.96	31.53	72.61	72.61	72.61
Washington-----	-	-	-	-	-	-	-	-	105.15	100.21	104.44	-	80.67	29.82	62.42	62.42	62.42
Wisconsin-----	-	-	-	-	-	-	-	-	67.01	-	46.44	20.04	32.27	17.57	22.75	22.75	22.75
Wyoming-----	-	-	-	.94	-	.76	-	.59	102.59	24.83	76.47	13.09	24.50	13.57	22.11	22.11	22.11
Combined rate-----	.90	-	.69	.19	.97	.46	.18	.37	61.70	17.14	51.27	9.58	31.35	11.82	24.88	24.88	24.88

TABLE B-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1971 - Continued

State	Active operations			Average men working daily							Average days active						
	Under-ground mines	Surface mines	Mills	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines	Open pit mines	Other surface mining	Total mining activities	Mills	
				Underground	Surface	Total											
Alabama-----	-	4	2	-	-	-	76	18	94	435	529	-	245	187	234	362	
Alaska-----	9	57	2	37	11	48	37	124	209	12	221	243	70	141	132	132	
Arizona-----	71	10	29	2,941	793	3,734	5,166	34	8,954	3,236	12,210	307	323	149	315	331	
Arkansas-----	1	10	6	43	11	56	210	8	274	1,026	1,300	235	231	46	246	237	
California-----	93	115	31	499	105	604	829	70	1,503	637	2,160	191	309	32	249	291	
Colorado-----	286	122	34	2,664	666	3,330	45	132	3,507	791	4,298	258	96	32	364	313	
Florida-----	-	2	-	-	-	-	-	14	15	50	113	-	-	-	-	-	
Georgia-----	-	5	3	-	-	-	20	39	59	59	118	-	290	292	291	346	
Idaho-----	69	38	13	1,692	333	2,025	25	42	2,092	163	2,258	256	137	58	251	251	
Illinois-----	3	2	1	17	4	21	-	2	23	35	58	223	-	10	205	256	
Kentucky-----	1	-	-	15	4	19	-	-	19	-	-	326	-	-	326	365	
Louisiana-----	-	-	3	-	-	-	-	-	-	1,161	1,161	-	-	-	-	-	
Maine-----	2	1	2	12	9	21	32	-	53	22	75	225	301	-	271	298	
Michigan-----	6	6	11	1,833	331	2,164	649	17	2,830	1,183	4,013	305	296	254	303	330	
Minnesota-----	-	31	22	-	55	55	4,341	-	4,396	3,698	8,094	255	315	-	315	325	
Missouri-----	17	9	9	1,806	727	2,533	-	-	2,533	416	2,949	273	-	-	273	298	
Montana-----	81	30	11	723	688	1,411	1,478	39	2,928	718	3,646	192	249	42	219	313	
Nebraska-----	-	2	-	-	-	-	-	2	2	-	2	-	-	10	10	-	
Nevada-----	66	79	29	125	36	161	988	57	1,206	633	1,839	161	320	146	291	323	
New Jersey-----	1	1	2	95	19	114	23	-	137	26	163	298	341	-	305	262	
New Mexico-----	56	51	16	1,434	362	1,796	1,353	39	3,188	1,001	4,189	246	314	51	272	306	
New York-----	3	2	5	521	136	657	161	-	818	499	1,317	233	232	-	233	252	
North Carolina-----	2	1	1	77	23	100	2	-	102	24	126	287	16	-	282	289	
Oklahoma-----	3	1	3	41	17	58	63	-	121	48	169	241	241	-	241	238	
Oregon-----	14	17	3	15	15	30	79	22	116	5	121	29	240	44	176	25	
Pennsylvania-----	3	1	3	691	346	1,037	24	-	1,061	134	1,195	314	263	-	313	334	
South Dakota-----	5	21	2	935	555	1,490	5	20	1,515	165	1,680	308	250	17	304	365	
Tennessee-----	16	1	6	1,136	273	1,409	-	-	1,409	332	1,741	254	-	-	254	281	
Texas-----	1	21	7	4	-	4	211	9	224	1,411	1,635	300	181	-	176	293	
Utah-----	92	62	12	1,161	216	1,377	2,135	47	3,559	1,598	5,157	251	344	23	303	313	
Virginia-----	1	1	2	185	55	240	2	-	242	36	278	253	140	-	252	220	
Washington-----	13	7	5	124	24	148	33	7	188	76	264	158	284	219	238	331	
Wisconsin-----	3	1	3	51	17	68	44	-	112	133	245	235	260	-	207	321	
Wyoming-----	23	91	7	254	135	389	1,116	65	1,570	415	1,985	229	307	62	278	309	
Total or average-----	941	872	288	19,133	5,951	25,084	19,147	958	45,189	20,173	65,362	267	309	133	282	314	

TABLE B-19. - Injury experience and worktime data by general work location at metal mines and mills in the United States, by State, 1971 - Continued

State	Man-days worked						Man-hours worked									
	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total	Underground mines			Open pit mines	Other surface mining	Total mining activities	Mills	Grand total
	Underground	Surface	Total						Underground	Surface	Total					
Alabama-----	8,448	3,232	11,680	18,626	3,363	21,989	157,611	179,600	-	73,932	-	168,208	36,988	205,196	1,272,288	1,477,484
Alaska-----	901,308	245,259	1,146,567	2,588	17,503	31,771	1,823	33,594	-	24,578	101,395	-	142,361	268,334	20,398	288,732
Arizona-----	11,418	2,855	14,273	8,046	2,824	1,078,865	3,903,014	71,210	91,346	1,962,079	1,972,512	13,375,303	64,062	22,611,877	8,630,899	31,242,776
Arkansas-----	96,615	18,510	115,125	3,076	374,039	242,712	310,076	71,210	91,346	22,837	114,183	421,743	3,040	538,966	1,941,526	2,480,492
California-----	699,850	159,770	859,620	4,330	3,076	374,039	190,907	564,946	771,624	148,864	920,488	2,046,354	23,068	2,989,910	1,528,293	4,518,203
Colorado-----	-	-	-	52,810	4,191	868,141	247,435	1,115,576	5,594,496	1,278,165	6,872,661	35,555	33,687	6,941,903	1,984,494	8,926,397
Florida-----	-	-	-	52,810	4,191	868,141	247,435	1,115,576	5,594,496	1,278,165	6,872,661	35,555	33,687	6,941,903	1,984,494	8,926,397
Georgia-----	433,672	84,754	518,426	5,803	11,384	17,187	20,386	37,573	3,457,618	678,021	4,135,639	55,700	91,073	146,773	171,258	318,031
Idaho-----	3,818	1,867	5,685	3,429	2,448	524,303	40,958	565,261	3,457,618	678,021	4,135,639	26,729	19,665	4,182,033	327,677	4,509,710
Illinois-----	4,888	1,304	6,192	20	20	4,705	8,961	13,666	30,554	6,934	37,490	37,650	160	37,810	71,089	109,339
Kentucky-----	-	-	-	-	-	6,192	1,630	7,822	39,108	10,429	49,537	-	-	49,537	13,036	62,573
Louisiana-----	-	-	-	-	-	-	423,894	423,894	-	-	-	-	-	-	3,391,152	3,391,152
Maine-----	3,068	1,651	4,719	9,624	-	14,343	6,546	20,889	24,544	13,217	37,761	76,992	-	114,753	52,371	167,124
Michigan-----	557,122	103,098	660,220	191,937	4,326	856,483	390,466	1,246,949	4,456,975	824,777	5,281,752	1,535,486	34,611	6,851,859	3,123,735	9,975,594
Minnesota-----	492,110	199,022	691,132	14,009	1,369,339	1,383,348	1,202,084	2,585,432	-	112,068	112,068	10,954,720	-	11,066,788	9,616,661	20,683,449
Missouri-----	139,448	131,271	270,719	368,161	-	691,132	123,969	815,101	3,936,886	1,592,175	5,529,061	-	-	5,529,061	991,756	6,520,817
Montana-----	-	-	-	-	1,620	640,500	224,916	865,416	1,091,538	1,050,154	2,141,692	2,945,140	12,965	5,099,797	1,799,309	6,899,106
Nebraska-----	-	-	-	20	-	20	-	20	-	-	-	-	160	-	-	160
Nevada-----	20,531	5,442	25,973	316,587	8,338	350,898	204,735	555,633	163,856	43,536	207,392	2,566,357	66,230	2,839,979	1,622,423	4,462,402
New Jersey-----	28,613	5,312	33,925	7,854	-	41,779	6,807	48,586	231,108	41,420	272,528	1,62,832	335,360	335,360	55,033	390,393
New Mexico-----	348,241	92,758	440,999	424,624	1,978	867,601	306,424	1,174,025	2,786,838	742,073	3,528,911	3,414,552	13,139	6,956,602	2,454,857	9,411,459
New York-----	119,224	33,870	153,094	37,357	-	190,451	125,516	315,967	153,796	270,936	424,732	298,859	-	5,523,591	1,004,143	2,527,734
North Carolina-----	22,124	6,608	28,732	32	-	28,764	6,942	35,706	176,995	52,866	229,861	96	-	229,957	55,539	285,496
Oklahoma-----	10,163	3,790	13,953	15,209	-	29,162	11,431	40,593	81,308	30,320	111,628	121,674	-	233,302	91,725	325,027
Oregon-----	429	-	429	18,973	959	20,361	124	20,485	3,449	-	3,449	151,829	7,550	162,828	992	163,820
Pennsylvania-----	216,654	109,099	325,753	6,310	344	460,172	60,312	520,484	1,733,236	872,797	2,606,033	50,483	-	2,656,516	357,860	3,014,376
South Dakota-----	287,753	170,825	458,578	1,250	-	357,763	93,452	451,215	2,303,031	1,367,349	3,670,380	11,000	2,750	3,684,130	482,498	4,166,628
Tennessee-----	288,177	69,586	357,763	-	-	357,763	413,181	452,698	2,303,031	1,367,349	3,670,380	11,000	2,750	3,684,130	482,498	4,166,628
Texas-----	1,200	-	1,200	38,227	90	39,517	413,181	452,698	2,303,031	1,367,349	3,670,380	11,000	2,750	3,684,130	482,498	4,166,628
Utah-----	293,185	52,244	345,429	733,631	1,075	1,080,135	500,909	1,581,035	2,343,161	416,602	2,759,763	5,869,461	8,633	8,637,857	4,007,200	12,645,057
Vermont-----	46,791	13,857	60,648	280	-	60,928	7,929	68,857	374,326	110,835	485,181	2,240	-	487,421	63,435	550,856
Virginia-----	29,719	4,990	34,709	8,567	1,530	44,806	25,153	69,959	237,749	39,918	277,667	68,400	13,438	359,505	201,222	560,727
Washington-----	7,528	3,196	10,724	12,476	-	23,200	42,711	65,911	59,689	26,446	86,135	99,810	-	185,945	341,524	427,469
Wisconsin-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming-----	58,833	30,073	88,906	343,047	4,028	435,981	128,240	564,221	477,617	241,596	719,213	3,207,728	32,229	3,959,170	1,105,569	5,064,719
Total-----	5,130,930	1,567,252	6,698,182	5,916,346	127,529	12,742,057	6,341,751	19,083,808	41,020,215	112,540,598	153,560,813	47,922,192	1,029,006	102,512,011	50,833,611	153,345,622

TABLE B-20. - Injury experience and worktime data on offeworkers at metal mines and mills in the United States, by mineral industry, 1971

Mineral industry	Injuries			Frequency rates per million man-hours			Severity rates per million man-hours			Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Copper-----	-	5	5	-	1.12	1.12	-	36	36	1,948	287	559,429	4,480,603
Gold-silver-----	-	-	-	-	-	-	-	-	-	264	293	77,225	616,161
Iron-----	-	-	-	-	-	-	-	-	-	1,662	262	434,688	3,478,996
Lead-zinc-----	-	-	-	-	-	-	-	-	-	746	258	192,157	1,540,257
Uranium-----	2	2	2	-	2.59	2.59	-	21	21	375	250	93,846	772,840
Miscellaneous metals-----	1	1	1	-	.24	.24	-	(1/)	(1/)	1,859	277	515,048	4,126,761
Total or combined-----	-	8	8	-	.53	.53	-	12	12	6,854	273	1,872,393	15,015,618

1/ Less than 0.5.

TABLE B-21. - Injury experience and worktime data on offeworkers at metal mines and mills in the United States, by State, 1971

State	Injuries			Frequency rates per million man-hours			Severity rates per million man-hours			Average men working daily	Average days active	Man-days worked	Man-hours worked
	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total	Fatal	Nonfatal	Total				
Alabama-----	-	-	-	-	-	-	-	-	-	3	286	857	8,056
Alaska-----	-	-	-	-	-	-	-	-	-	9	250	2,251	16,564
Arizona-----	-	-	-	-	-	-	-	-	-	1,282	272	349,265	2,794,111
Arkansas-----	-	-	-	-	-	-	-	-	-	308	258	79,502	636,018
California-----	-	-	-	-	-	-	-	-	-	91	266	24,180	192,676
Colorado-----	1	1	1	-	0.68	0.68	-	1	1	590	310	182,645	1,460,366
Florida-----	-	-	-	-	-	-	-	-	-	69	249	17,194	137,552
Georgia-----	-	-	-	-	-	-	-	-	-	15	254	3,817	30,533
Idaho-----	-	-	-	-	-	-	-	-	-	133	257	34,129	271,875
Illinois-----	-	-	-	-	-	-	-	-	-	19	254	4,826	38,608
Kentucky-----	-	-	-	-	-	-	-	-	-	1	326	326	2,607
Louisiana-----	-	-	-	-	-	-	-	-	-	201	262	52,652	430,260
Maine-----	-	-	-	-	-	-	-	-	-	16	260	4,162	33,293
Michigan-----	-	-	-	-	-	-	-	-	-	53	253	13,426	106,348
Minnesota-----	-	-	-	-	-	-	-	-	-	1,212	259	313,827	2,510,622
Missouri-----	-	-	-	-	-	-	-	-	-	365	255	93,185	745,483
Montana-----	-	1	1	-	5.62	5.62	-	421	421	89	250	22,249	177,996
Nevada-----	-	-	-	-	-	-	-	-	-	231	304	70,263	568,650
New Jersey-----	-	-	-	-	-	-	-	-	-	36	247	8,876	74,495
New Mexico-----	-	4	4	-	5.06	5.06	-	108	108	358	276	98,908	789,966
New York-----	-	-	-	-	-	-	-	-	-	121	270	32,611	260,889
North Carolina-----	-	-	-	-	-	-	-	-	-	5	260	1,298	10,381
Oklahoma-----	-	-	-	-	-	-	-	-	-	6	242	1,449	11,588
Pennsylvania-----	-	-	-	-	-	-	-	-	-	135	254	34,267	274,138
South Dakota-----	-	-	-	-	-	-	-	-	-	155	327	50,651	405,214
Tennessee-----	-	-	-	-	-	-	-	-	-	63	262	16,520	132,158
Texas-----	-	-	-	-	-	-	-	-	-	567	266	151,007	1,208,061
Utah-----	-	-	-	-	-	-	-	-	-	427	312	133,201	1,065,606
Virginia-----	-	-	-	-	-	-	-	-	-	27	256	6,925	55,400
Washington-----	-	-	-	-	-	-	-	-	-	13	282	3,665	29,316
Wisconsin-----	-	-	-	-	-	-	-	-	-	43	223	9,580	77,277
Wyoming-----	-	2	2	-	4.35	4.35	-	35	35	211	259	54,679	459,511
Total or combined-----	-	8	8	-	.53	.53	-	12	12	6,854	273	1,872,393	15,015,618

APPENDIX C. --QUESTIONNAIRE USED

Form 6-1425-A
(October 1968)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINESBudget Bureau No. 42-R0843.
Approval expires August 1971.INJURIES AND EMPLOYMENT
IN METALLIC ORE MINES AND MILLS

(Please correct if name or address has changed.)

I. EMPLOYMENT AND INJURIES

1. EMPLOYMENT.—Report data for all men engaged in production, exploration, development, overburden removal, stockpile, construction, maintenance, and repair work—including supervisory and technical personnel at the operation. Include proprietors and firm members (owners, partners, or operators) performing manual labor or supervisory duties. Report separate data on all offeworkers at the operation.

DEPARTMENT	(a) Average Number of Men Working on Active Days	(b) Days Active During Year	(c) Total Man-Shifts Worked During Year	(d) Length of Shift (Hours)	(e) Total Man-Hours Worked During Year	(f) Summary of Work Injuries		(g) Production* (short tons)
						Fatal	Nonfatal	
AT UNDERGROUND MINE								
(01) Underground								
(02) Surface shops, yards, etc., at underground mines only								
AT OPEN-PIT MINE								
(03) Open-pit (including associated shops and yards)								
OTHER SURFACE MINING								
(06) Dredging								
(07) Hydraulic								
(09) Other methods: (specify)								
AT MILL								
(30) Ore-dressing plants (including associated shops and yards)								
AT OFFICE								
(00) Offeworkers (at mine and or mill)								

* Include crude ore or metal from mines, pits, dredges, placers, leaching or other operations.

Convert all units of measure to short tons, or specify units reported.

How many mines _____ (number) and mills _____ (number) are included in the employment data? Give name(s) and location(s):

MINE NAME	COUNTY	STATE	MILL NAME	COUNTY	STATE
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

2. INJURIES. If you had NO DISABLING WORK INJURIES** during the year, check block ☐; otherwise, please complete column f, Summary of Work Injuries, above; also list them on the reverse side of this page.

**A DISABLING WORK INJURY is one which occurs in the course of and arises out of employment, irrespective of whether the injury is compensable and whether or not your establishment was operating on the days following the date of injury. The term "injury" includes occupational diseases. A disabling work injury is one which results in death or permanent impairment in which temporarily disables the worker for 1 full day or more after the day of injury (USAS Z16.1).

II. GENERAL

1. If any new or reopened mines or mills were operated in your vicinity during the past year, give names and addresses of owners or operators _____

2. Have you subcontracted any of your operations during the reporting year? Yes ☐ No ☐(a) If yes, is subcontractor's data included in this report? Yes ☐ No ☐

(b) If you subcontracted any of your operations, please furnish the following information: Name and business address of the subcontractor(s) _____

(c) Effective date of subcontract(s) _____ (d) Name and exact location of the operations subcontracted _____

Signature _____	Title _____	Date _____
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(OVER)

GPO 846-331

INJURY DATA

List below every disabling work injury (see definition on front side of form) which occurred during the year to all classes of your employees included in the employment data. Write in a description of the accident and then fill in blocks above the description that are applicable to the accident.

CASE NO.	DEPARTMENT (List department in which accident occurred)	SOURCE OF INJURY (Object, substance, exposure, or bodily motion which directly produced or inflicted the injury, such as timber, chemicals, welder's flash, or lifting, respectively)	EXTENT OF DISABILITY (Please indicate the extent of disability by an entry in one of the columns below)			PART OF BODY INJURED (Be specific, such as forehead, left foot, index finger, right hand, etc.)	NATURE OF INJURY (Amputation, bruise, strain, dermatitis, etc.)
			Death check-mark (Enter a check-mark)	Permanent-total disability ^a	Permanent-partial disability ^a (Enter percentage of loss and part of body affected)		
Example	Crusher	Rock				Left Shoulder	Broken bone
Describe the accident: Employee was barring down in hopper to free hung feed to crusher. Hang up moved suddenly and a large rock glanced off the bar and hit employee on left shoulder fracturing collar bone.							
1.							
Describe the accident:							
2.							
Describe the accident:							
3.							
Describe the accident:							
4.							
Describe the accident:							
5.							
Describe the accident:							
6.							
Describe the accident:							
7.							
Describe the accident:							
8.							
Describe the accident:							

^a If more convenient, etc.,

^a Change for each injury as established by the American Standards Association, in accordance with instructions from USAS Z16.1.

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